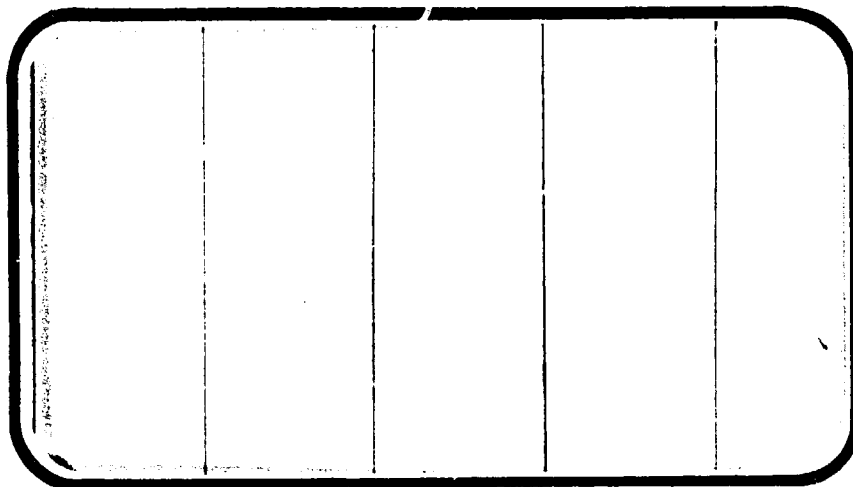




NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

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(NASA-CR-134118) AERODYNAMIC RESULTS OF A
SEPARATION EFFECTS TEST CONDUCTED IN THE
AFDC 40 BY 40 INCH TUNNEL A FACILITY ON THE
ROCKWELL INTERNATIONAL LAUNCH CONFIGURATION
3 (MODEL 32-OTS) INTEGRATED VEHICLE (IA13),

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Unclas
G3/18 33794

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT



JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA Management services

SPACE DIVISION



CHRYSLER
CORPORATION

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AERODYNAMIC RESULTS OF A SEPARATION EFFECTS
TEST CONDUCTED IN THE AEDC 40 x 40 INCH TUNNEL A
FACILITY ON THE ROCKWELL INTERNATIONAL LAUNCH
CONFIGURATION 3 (MODEL 32-OTS) INTEGRATED VEHICLE
(IA13)

Vol. II of III

J. H. Campbell, II
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Prepared under NASA Contract Number NAS9-13247

by

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for

Engineering Analysis Division
Johnson Space Center
National Aeronautics and Space Administration
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TUNNEL TEST SPECIFICS:

Test Number: AEDC VA-323
NASA Series Number: IA13
Test Dates: July 5-17, 1973

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Chrysler Corporation Space Division assumes no responsibility for the data presented other than display characteristics.

AERODYNAMIC RESULTS OF A SEPARATION EFFECTS
TEST CONDUCTED IN THE AEDC 40 x 40 INCH TUNNEL A
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CONFIGURATION 3 (MODEL 32-OTS) INTEGRATED VEHICLE
(IA13)

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J. H. Campbell, II
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ABSTRACT

Experimental aerodynamic investigations were conducted from July 5 through July 17, 1973, in the AEDC/VKF tunnel A facility, on a 0.01 scale model (Model 32-OTS) of the Rockwell International launch configuration 3 Integrated Vehicle (excluding the left-hand booster). The AEDC captive trajectory system was utilized in conjunction with the tunnel primary sector to obtain "grid-type" data for tank (ET) abort from the Orbiter (SSV), and for nominal separation of one Booster (SRB) from the Orbiter-Tank combination. Booster separation was investigated with and without separation motors plume simulation. The plumes were generated by eight $M_j = 2.15$ nozzles using a 1500 psia cold air supply.

Free stream data were obtained for all models (orbiter, tank, orbiter-tank, and right-hand booster) to provide baselines for evaluation of proximity effects.

The entire investigation was conducted at a nominal free stream Mach number of 4.5 and at Reynolds number per foot ranging from approximately 7.0×10^5 to 6.6×10^6 .

This report is published in three volumes. Volume I contains data figures through page 894. Volume II contains the remaining data figures and the appendix (tabulated source data) is found in Volume III.

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Schedule of Coefficients Plotted:

A) CN, CA, CLM, CBL, CY, CYN vs ALPHA

B) CN, CLM, CY, CYN vs ALPHA

C) CN, CA, CLM, CBL, CY, CYN vs Z

D) CN, CLM, CY, CYN vs Z

NOMENCLATURE

| <u>SYMBOL</u> | <u>PLOT SYMBOL</u> | <u>DEFINITION</u> |
|---------------|------------------------|--|
| a | | speed of sound; ft/sec |
| V | | velocity; ft/sec |
| M | MACH | Mach number, V/a |
| q_{∞} | Q(PSF) | dynamic pressure, $\rho V^2/2$; psf |
| ρ | RHO | mass density; slugs/ft ³ |
| A_b | | base area; ft ² |
| C_{A_b} | CAB | base force coefficient, $-A_b(P_b - P_{\infty})/q_{\infty}S_w$; <u>base force</u> $q_{\infty}S_w$ |
| C_{A_f} | CAF | forebody axial force coefficient; $C_A - C_{A_b}$ |
| C_A | CA | axial force coefficient excluding adjustments for base and sting/balance cavity pressure measurements; <u>axial force</u> $q_{\infty}S_w$ |
| C_N | CN | normal force coefficient; <u>normal force</u> $q_{\infty}S_w$ |
| C_l | CBL | rolling moment coefficient; <u>rolling moment</u> $q_{\infty}S_w l_{ref}$ |
| C_m | CLM | pitching moment coefficient; <u>pitching moment</u> $q_{\infty}S_w l_{ref}$ |
| C_Y | CY | side force coefficient; <u>side force</u> $q_{\infty}S_w$ |
| C_n | CYN | yawing moment coefficient; <u>yawing moment</u> $q_{\infty}S_w l_{ref}$ |

NOMENCLATURE (Continued)

| <u>SYMBOL</u> | <u>PLOT SYMBOL</u> | <u>DEFINITION</u> |
|-------------------|------------------------|--|
| S_w | SREF | reference wing area; ft^2 |
| CPS | | captive trajectory system |
| P_{b1}/P_∞ | PB1/P | number one base pressure ratio |
| P_{b2}/P_∞ | PB2/P | number two base pressure ratio |
| P_c/P_∞ | PC/P | sting/balance cavity pressure ratio |
| P_{b1} | PB1 | number one base pressure; psia |
| P_{b2} | PB2 | number two base pressure; psia |
| P_c | PC | SRB separation nozzle chamber pressure; psia |
| P_∞ | P | freestream static pressure, psia |
| $P_{t\infty}$ | PTOTAL | freestream total pressure, psia |
| $C_{p_{b1}}$ | CPB1 | number one orbiter base pressure coefficient, $(P_{b1} - P_\infty)/q_\infty$ |
| $C_{p_{b2}}$ | CPB2 | number two orbiter base pressure coefficient, $(P_{b2} - P_\infty)/q_\infty$ |
| C_{p_c} | CPC | sting balance cavity pressure coefficient, $(P_c - P_\infty)/q_\infty$ |
| R/l | RN/L | freestream unit Reynolds number $\times 10^{-6}$; per foot |
| l_{ref} | LREF BREF | reference dimension used to reduce the measured balance moment data to coefficient form, orbiter model body length, inches |
| δ_a | AILRON | aileron deflection; degrees |
| δ_e | ELEVTR | elevon deflection; degrees |

NOMENCLATURE (Continued)

| <u>SYMBOL</u> | <u>PLOT SYMBOL</u> | <u>DEFINITION</u> |
|----------------|------------------------|--|
| δ_r | RUDDER | rudder deflection; degrees |
| $\Delta\alpha$ | DALPHA | parameter name for nominal angle of attack difference, ($\Delta\alpha = \alpha_{SRB} - \alpha_{OT}$) or ($\Delta\alpha = \alpha_{ET} - \alpha_0$); degrees |
| $\Delta\beta$ | DBETA | parameter name for nominal angle of sideslip difference, ($\Delta\beta = \beta_{SRB} - \beta_{OT}$) or ($\Delta\beta = \beta_{ET} - \beta_0$); degrees |
| $\alpha_{O/T}$ | ALPHA | orbiter tank angle of attack. All source data are presented as a function of $\alpha_{O/T}$, except for isolated tests and those where the tank is separating from the orbiter; degrees $\alpha_{SRB} = \alpha_{O/T} + \Delta\alpha$ |
| α_0 | ALPHA | orbiter angle of attack. Source data are presented as a function of α_0 for isolated tests and those where the tank is separating from the orbiter; degrees $\alpha_{ET} = \alpha_0 + \Delta\alpha$ |
| α_{ET} | ALPHA | external tank angle of attack. Source data are presented as a function of α_{ET} , only, for tests of the isolated external tank, degrees |
| α_{SRB} | ALPHA | solid rocket booster angle of attack, source data are presented as a function of α_{SRB} , only, for tests of the isolated SRB, degrees |
| $\beta_{O/T}$ | BETA | orbiter tank angle of sideslip. All source data are presented as a function of $\beta_{O/T}$ except for isolated tests and those where the tank is separating from the orbiter; degrees $\beta_{SRB} = \beta_{O/T} + \Delta\beta$ |
| β_0 | BETA | orbiter angle of sideslip. Source data are presented as a function of β_0 for isolated tests and those where the tank is separating from the orbiter; degrees $\beta_{ET} = \beta_0 + \Delta\beta$ |

NOMENCLATURE (Concluded)

| <u>SYMBOL</u> | <u>PLOT SYMBOL</u> | <u>DEFINITION</u> |
|---------------|------------------------|---|
| β_{ET} | BETA | external tank angle of sideslip. Source data are presented as a function of β_{ET} , only, for tests of the isolated external tank, degrees |
| β_{SRB} | BETA | solid rocket booster angle of sideslip. Source data are presented as a function of β_{SRB} , only, for tests of the isolated SRB, degrees |
| δ_{SB} | SPDBRK | speed brake flare angle, degrees |
| c.g. | | center of gravity |
| $T_{t\infty}$ | TTOTL | freestream total temperature; °R |
| T_{∞} | T | freestream static temperature; °R |
| ΔX | X | separation distance measured along the longitudinal, X axis; inches. See figures 2d and 2e |
| | XMRP | X station of the moment reference center; inches. See figures 2b and 2c |
| ΔY | Y | separation distance measured along the lateral, Y axis; inches. See figures 2d and 2e. |
| | YMRP | Y station of the moment reference center; inches. See figures 2b and 2c. |
| | ZMRP | Z station of the moment reference center; inches. See figures 2b and 2c. |
| ΔZ | Z | separation distance measured along the vertical Z axis; inches. See figures 2d and 2e. |

INTRODUCTION

The NASA Space Shuttle Integrated Vehicle (SSV) is comprised of four components: an orbiter (O), an external fuel tank (ET) for the orbiter, and two solid rocket boosters (SRB's). During the ascent phase of the SSV the ET and SRB's are separated from the orbiter, and return to earth. In order to assure clean separation of the ET and the SRB's from the orbiter it is necessary to know the aerodynamic forces acting on these components, and the orbiter, during the separation procedure. This test was conducted to determine the interacting aerodynamic effects for two situations: 1) nominal abort of the SRB from the orbiter/external tank combination and 2) emergency abort of the external tank from the orbiter.

Data were obtained at a freestream Mach number of 4.5 with Reynolds number varying from 7.0×10^5 to 6.6×10^6 per foot. The SRB has small rocket motors which are utilized to assure positive separation. During these tests motor operation was simulated by using cold air jets and data were recorded with and without these motor plume simulations.

The isolated vehicle components were tested over an angle of attack and sideslip range as shown below:

| <u>Vehicle Component</u> | <u>α Range</u> | <u>β Values</u> |
|--------------------------|----------------------------------|----------------------------------|
| Orbiter | -10° to 30° | 0°, 5°, 10° |
| External Tank | -40° to 10° | 0°, 5° |
| Orbiter/External Tank | -10° to 30° | 0°, 5° |
| Solid Rocket Booster | -30° to 15° | -10°, 0°, 5°, 10°, 20°, 30° |

INTRODUCTION (Continued)

In order to examine the interacting flow field effects during the two abort situations, the separating component was held at attitudes relative to the parent configuration and moved to various field positions to record aerodynamic data. The relative attitudes tested were:

| <u>Vehicle Component</u> | <u>$\Delta\alpha$ Range</u> | <u>$\Delta\beta$ Values</u> |
|--------------------------|--|--|
| External Tank | -30° to 5° | 0°, $\pm 5^\circ$ |
| Solid Rocket Booster | -20° to 5° | 0°, $\pm 5^\circ$, -10°, -20° |

where for external tank $\Delta\alpha = (\alpha_{ET} - \alpha_0)$, $\Delta\beta = (\beta_{ET} - \beta_0)$ and for solid rocket booster $\Delta\alpha = (\alpha_{SRB} - \alpha_{0/ET})$, $\Delta\beta = (\beta_{SRB} - \beta_{0/ET})$.

The vertical (Z), longitudinal (X) and lateral (Y) separation distance ranges were:

| <u>Vehicle Component</u> | <u>X-Inches(f.s.)</u> | <u>Y-Inches(f.s.)</u> | <u>Z-Inches(f.s.)</u> |
|--------------------------|-----------------------|-----------------------|-----------------------|
| External Tank | 0 to 1200 | -200 to 200 | 0 to 1300 |
| Solid Rocket Booster | 0 to 1600 | 0 to 800 | 0 to 100 |

where for the external tank, X, Y, and Z = 0 when the ET nose is in the mated position with respect to the orbiter. (See figure 2d.) For the SRB, X, Y, and Z = 0 when the SRB nose is in the mated position with respect to the Orbiter/External Tank. (See figure 2e.)

During SRB separation testing (see figure 2e.) the external tank was rigidly attached to the orbiter, which was supported inverted on the tunnel primary sector. The booster was supported on the CTS via a flow-through balance and sting.

During external tank separation testing (see figure 2d.), the

INTRODUCTION (Concluded)

orbiter was supported inverted on the primary sector and the ET was supported on the CTS.

No base or cavity pressure taps were built into the models. To obtain these pressures (two base, one cavity per model), hardline tubing was routed to the vicinity of the model bases and bent into areas where pressures were desired.

As an aid in clarifying the interdependence of the test configuration with the tabulated source data in the Appendix, the following array is a necessary adjunct to the Run Summary Schedule of Table II.

| <u>DATASET</u> | <u>BALANCE</u> | <u>TEST CONFIGURATION</u> | <u>APPENDIX PAGE NUMBER</u> |
|-----------------------------|----------------|------------------------------------|---------------------------------|
| RTJ001 through RTJ099 | Orbiter | } Tank Separating From Orbiter | 1 |
| RTJT01 through RTJT99 | Tank | | 89 |
| RTJ160 through RTJ283 | Orbiter Tank | } SRB Separating From Orbiter Tank | 90 |
| RTJ300 through RTJ483 | SRB | | 178 |
| RTJ500 RTJ501 | Tank | } Isolated | 179 |
| RTJ502 through RTJ507 | Orbiter | | 361 |
| RTJ508 RTJ509 | Orbiter Tank | | 362 |
| RTJ510 through RTJ536 | SRB | | 543 |
| | | | 543 |
| | | | 544 |
| | | | 545 |
| | | | 550 |
| | | | 551 |
| | | | 552 |
| | | | 553 |
| | | | 565 |

CONFIGURATIONS INVESTIGATED

The 0.01-scale 32-OTS models consists of an orbiter, tank, and one booster (with metric high-pressure separation thrusters, fore and aft). See figures 2b and 2c.

The configuration of each vehicle component tested is given below. Pertinent dimensional data for these model components may be found in Table III.

Orbiter 09 = (B₁₉C₇F₅M₄) (W₁₀₇E₂₃) (V₇R₅) where:

| <u>Component</u> | <u>Definition</u> |
|------------------|---|
| B ₁₉ | Fuselage per Rockwell line VL70-000139B. (Model drawing SS-A00062) |
| C ₇ | Canopy per Rockwell Lines VL70-000139B. (Model drawing SS-A00062) |
| E ₂₃ | Elevons per Rockwell lines VL70-000139B. (Model drawing SS-A00109) |
| F ₅ | Body flap per Rockwell lines VL70-000139B. (Model drawing SS-A00062) |
| M ₄ | Orbital Maneuvering System per Rockwell lines VL70-000139B. (Model drawing SS-A00062) |
| R ₅ | Rudder per Rockwell lines VL70-000139B and VL70-000095. (Model drawing SS-A00062) |
| V ₇ | Vertical tail per Rockwell lines VL70-000139B and VL70-000095. (Model drawing SS-A00062) |
| W ₁₀₇ | Wing per Rockwell lines VL70-000130B. (Model drawing SS-A00109) |

The external tank (T₁₀) is not broken down into subassemblies and was constructed to Rockwell lines VL72-000088 and VL78-000041 (Model Drawing SS-A-00108).

CONFIGURATIONS INVESTIGATED
(Concluded)

The solid rocket booster (S_g) is not broken down into subassemblies and was constructed to Rockwell lines VL72-000088 and VL77-000036 (Model Drawing SS-A-00113).

TEST FACILITY DESCRIPTION

The AEDC von Karman Facility (VKF) Tunnel A is a continuous, closed-circuit, variable density wind tunnel with an automatically driven flexible-plate-type nozzle and a 40- by 40-in. test section (see Figure 3). The tunnel can be operated at Mach numbers from 1.5 to 6 at maximum stagnation pressures from 29 to 200 psia, respectively, and stagnation temperatures up to 750°R (M = 6). Minimum operating pressures range from about one-tenth to one-twentieth of the maximum at each Mach number. A description of the tunnel and airflow calibration information may be found in the Test Facilities Handbook*.

*Test Facilities Handbook (Ninth Edition). "von Karman Gas Dynamics Facility, Vol. 3", Arnold Engineering Development Center, July 1971.

DATA REDUCTION

Six-component aerodynamic force and moment data were recorded for the Orbiter, External Tank, and Orbiter/ET. Four-component force and moment data were recorded for the SRB. Thrust loads generated by the SRB separation motors were treated as tares and were subtracted from balance recorded loads before computing coefficients. For Orbiter freestream and ET abort testing, the Orbiter was mounted on the AEDC 0.85-inch 4.00-Y-36-037 balance. For ET freestream and ET abort, the ET was mounted on the AEDC 0.85-inch 4.00-H-36-049 balance. For SRB separation, the Orbiter/ET was mounted on the 4.00-Y-36-049 balance. For SRB freestream and separation, the SRB was mounted on the Rockwell 0.625-inch 4.00-H-34-065 flow-through balance.

All force and moment data were reduced to coefficient form in the body axis system. Base and balance cavity pressures were recorded. However, no pressure adjustments were made to the force and moment data. All coefficients are based on the following reference dimensions.

S_{REF} = orbiter wing reference area = 0.269 ft²

l_{REF} = b_{REF} = orbiter body length = 12.903 inches

Moments are about the following reference c.g. locations:

Orbiter (Isolated and with ET separating):

$XMRP$ = 8.516 inches aft of orbiter nose (see figure 2c)

$ZMRP$ = 4.0 (fuselage reference line 4.0)

External Tank (Isolated and while separating from orbiter):

$XMRP$ = 10.94 inches aft of ET nose (see figure 2c)

$ZMRP$ = 0.0 (tank centerline)

Orbiter/ET (Isolated and with SRB separating)

XMRP = 7.43 inches aft of ET nose

(see figure 2b)

ZMRP = 0.47 inches above ET centerline

SRB (Isolated and while separating from Orbiter/ET)

XMRP = 9.67 inches aft of SRB nose (see figure 2b)

ZMRP = 0.0 (SRB centerline)

EXTERNAL TANK SEPARATION DATA

TABLE II.

TEST: JAI3

DATA SET/RUN NUMBER COLLECTION SUMMARY

DATE: POST-TEST

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | NO. OF RUNS | X - MACH NUMBERS | | | | | | |
|---------------------|---------------|-------|---|-------------------|----|-----|------|------|-----|-----|-------------|------------------|----|-----|-----|------|------------------|--|
| | | A | B | DA | DB | Y | Z | MACH | PT | DEL | DER | RF | 0 | 400 | 800 | 1200 | TEST RUN NUMBERS | |
| RTJ031 | 00/T10 | 0 | 0 | 5 | 0 | 0 | A | 4.53 | 110 | 0 | 0 | 0 | 1 | 2 | 3 | 4 | | |
| 002 | | | | 0 | | | B | | | | | | 5 | 6 | 7 | 8 | | |
| 003 | | | | | | 200 | B | | | | | | 12 | 11 | 10 | 9 | | |
| 004 | | | | | 5 | | B | | | | | | 13 | 14 | 15 | 16 | | |
| 005 | | | | | | 0 | B | | | | | | 20 | 19 | 18 | 17 | | |
| 006 | | | | -5 | 0 | | C | | | | | | 21 | 22 | 23 | 24 | | |
| 007 | | | | -10 | | | D | | | | | | 25 | 26 | 27 | 28 | | |
| 008 | | | | | | 200 | D | | | | | | 32 | 31 | 30 | 29 | | |
| 009 | | | | | 5 | | D | | | | | | 33 | 34 | 35 | 36 | | |
| 010 | | | | | | 0 | D | | | | | | 40 | 39 | 38 | 37 | | |
| 011 | | | | -20 | 0 | | E | | | | | | 41 | 42 | 43 | 44 | | |
| 012 | | | | | | 200 | E | | | | | | 48 | 47 | 46 | 45 | | |
| 013 | | | | | 5 | | E | | | | | | 49 | 50 | 51 | 52 | | |
| 014 | | | | | | 0 | E | | | | | | 56 | 55 | 54 | 53 | | |
| 015 | | | | -30 | 0 | | 1300 | | | | | | 57 | 58 | 59 | 60 | | |
| 016 | | | | 5 | | | A | | | | | | 61 | 62 | 63 | 64 | | |
| 017 | | | | 0 | | | F | | | | | | 65 | 66 | 67 | - | | |
| 018 | | | | | | | F | | | | | | 68 | 69 | 70 | 71 | | |

| | | | | | | | | | | | | |
|--|------|----|-----|------|----|----|----|----|----|----|----|--|
| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75.76 |
| CN | ICLM | KY | KYN | ICBL | CA | CA | CA | CA | CA | CA | CA | CA |
| COEFFICIENTS | | | | | | | | | | | | NDV |
| SCHEDULES | | | | | | | | | | | | NDV |
| A) = 0, 100, 200, 300, 400, 600, 800, 1000, 1300 | | | | | | | | | | | | B) = 0, 100, 200, 300, 400, 600, 800, 1000 |
| C) = 200, 300, 400, 600, 800, 1000, 1300 | | | | | | | | | | | | D) = 300, 400, 600, 800, 1000, 1300 |
| E) = 600, 800, 1000, 1300 | | | | | | | | | | | | F) = 0, 100, 200, 300, 400, 600, 800 |

α, β, DA, DB - DEGREES ; X, Y - INCHES (FULL SCALE) ; DEL, DER - DEGREES ; PT - PTIA ; RF - DEGREES
 # 0 DATA - ORBITER DATA, T DATA - EXTERNAL TANK DATA

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POSTTEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | X — MACH-NUMBERS —→ | | | | | | | |
|------------------------|--|---------------------------------|-------|---|-------------------|----|-----|-----|------|------|-----|-----|----|-------------------|---------------------|-----|-----|------|-----|--|--|--|
| | | | a | B | Dx | DB | Y | Z | MM | PT | DEL | DER | RF | NO. OF RUNS | 0 | 400 | 800 | 1200 | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| RTJ 019 | | D ₉ /T ₁₀ | -5 | 0 | 0 | 0 | 0 | 200 | F | 4.53 | 110 | 0 | 0 | 0 | | 75 | 74 | 73 | 72 | | | |
| 020 | | | | | | | 5 | ↓ | F | | | | | | | 76 | 77 | 78 | 79 | | | |
| 021 | | | | | | | ↓ | 0 | F | | | | | | | 83 | 82 | 81 | 80 | | | |
| 022 | | | | | | | -5 | 0 | C | | | | | | | 84 | 85 | 86 | 87 | | | |
| 023 | | | | | | | -10 | ↓ | D | | | | | | | 88 | 89 | 90 | 91 | | | |
| 024 | | | | | | | | 200 | D | | | | | | | 95 | 94 | 93 | 92 | | | |
| 025 | | | | | | | | 5 | D | | | | | | | 96 | 97 | 98 | 99 | | | |
| 026 | | | | | | | ↓ | 0 | D | | | | | | | 103 | 102 | 101 | 100 | | | |
| 027 | | | | | | | -20 | 0 | E | | | | | | | 104 | 105 | 106 | 107 | | | |
| 028 | | | | | | | | 200 | E | | | | | | | 111 | 110 | 109 | 108 | | | |
| 029 | | | | | | | | 5 | E | | | | | | | 112 | 113 | 114 | 115 | | | |
| 030 | | | | | | | ↓ | 0 | E | | | | | | | 119 | 118 | 117 | 116 | | | |
| 031 | | | ↓ | | | | -30 | ↓ | 1300 | ↓ | ↓ | | | | | 120 | 121 | 122 | 123 | | | |
| 032 | | | -10 | | | | 5 | 0 | A | 4.52 | 80 | | | | | 124 | 125 | 126 | 127 | | | |
| 033 | | | | | | | 0 | ↓ | B | | | | | | | 128 | 129 | 130 | 131 | | | |
| 034 | | | | | | | | 200 | B | | | | | | | 135 | 134 | 133 | 132 | | | |
| 035 | | | | | | | | 5 | B | | | | | | | 136 | 137 | 138 | 139 | | | |
| 036 | | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | 0 | B | | | | | | | 143 | 142 | 141 | 140 | | | |

[illegible]

$\alpha, \beta, \delta, \delta\alpha, \delta\beta$ — DEGREES ; X.Y — INCHES (FULLSCALE) ; DEL, DER — DEGREES ; PT — PSIA ; RF — DEGREES (RUDDER FLARE)

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | TEST RUN NUMBERS | | | | | | | | | |
|---------------------|--|---------------|----------|---------|-------------------|-----------|-----|----------------------|-----|------|-----|-----|----|------------------|-------------|------------------|-----|-----|-----|------|--|--|--|--|--|
| | | | α | β | D α | D β | Y | Z | MAN | PT | DEL | DER | RF | X - MAGN-NUMBERS | | | | | | | | | | | |
| RTJ037 | | 09/T10 | -10 | 0 | -5 | 0 | 0 | C | | 4.52 | 80 | 0 | 0 | 0 | | | 0 | 400 | 800 | 1200 | | | | | |
| 038 | | | | | -10 | | | D | | | | | | | | | 144 | 145 | 146 | | | | | | |
| 039 | | | | | | | 200 | D | | | | | | | | | 148 | 149 | 150 | | | | | | |
| 040 | | | | | | | 5 | D | | | | | | | | | 155 | 154 | 153 | | | | | | |
| 041 | | | | | | | 0 | D | | | | | | | | | 156 | 157 | 158 | | | | | | |
| 042 | | | | | -20 | 0 | | G | | | | | | | | | 163 | 162 | 161 | | | | | | |
| 043 | | | | | | | 200 | G | | | | | | | | | 164 | 165 | 166 | | | | | | |
| 044 | | | | | | | 5 | G | | | | | | | | | 171 | 170 | 169 | | | | | | |
| 045 | | | | | | | 0 | G | | | | | | | | | 172 | 173 | 174 | | | | | | |
| 046 | | | | | -30 | 0 | | 1300 | | | | | | | | | 179 | 178 | 177 | | | | | | |
| 047 | | | -21 | | 6 | | | B | | | | | | | | | 180 | - | - | | | | | | |
| 048 | | | | | 1 | | | B | | | | | | | | | 181 | 182 | 183 | | | | | | |
| 049 | | | | | -4 | | | H _I | | | | | | | | | 188 | 187 | 186 | | | | | | |
| 050 | | | | | -9 | | | I _J , K** | | | | | | | | | 189 | 190 | 191 | | | | | | |
| 051 | | | | | -19 | | | 1000 | | | | | | | | | 193 | 194 | 195 | | | | | | |
| | | | | | | | | | | | | | | | | | 197 | - | - | | | | | | |
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COEFFICIENTS

B) 0, 100, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE)

C) 200, 300, 400, 600, 800, 1000, 1300

D) 200, 400, 600, 800, 1000, 1300

H) 200, 300, 400, 600, 800, 1000

J) 600, 800, 1000

$\alpha, \beta, D\alpha, D\beta$ - DEGREES ; X, Y - INCHES (FULL SCALE) ; DEL, DER - DEGREES ; $PT - PSIA$; RF - DEGREES
 (RUDDER FLANGE)

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST: IA-13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: Aug-71 57

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | NO. OF RUNS | X MACH-NUMBERS → | | | | TEST RUN NUMBERS | | | |
|---------------------|---------------|-------|---|-------------------|----|------|---|------|-----|-----|-----|-------------|------------------|-----|-----|------|------------------|--|--|--|
| | | A | B | B2 | DP | Y | Z | Mach | Pt | DEL | DER | | 0 | 100 | 200 | 1200 | | | | |
| RTJ052 | ϕ_2/T_0 | 0 | 0 | 0 | 0 | -200 | B | 4.53 | 110 | 10 | -10 | | 199 | | | | | | | |
| 053 | | T | T | C | C | 0 | B | | | | | | 191 | | | | | | | |
| 054 | | | | 0 | 0 | 200 | B | | | | | | 200 | | | | | | | |
| 055 | | | | T | -5 | -200 | B | | | | | | 201 | | | | | | | |
| 056 | | | | | 5 | 0 | B | | | | | | 202 | | | | | | | |
| 057 | | | | | 5 | 200 | B | | | | | | 203 | | | | | | | |
| 058 | | | | -10 | 0 | -200 | D | | | | | | 204 | | | | | | | |
| 059 | | | | T | 0 | 0 | D | | | | | | 205 | | | | | | | |
| 060 | | | | | 0 | 200 | D | | | | | | 206 | | | | | | | |
| 061 | | | | | -5 | -200 | D | | | | | | 207 | | | | | | | |
| 062 | | | | | 5 | 0 | D | | | | | | 208 | | | | | | | |
| 063 | | | | | 5 | 200 | D | | | | | | 209 | | | | | | | |
| 064 | | | | -20 | 0 | -200 | E | | | | | | 210 | | | | | | | |
| 065 | | | | T | 0 | 0 | E | | | | | | 211 | | | | | | | |
| 066 | | | | | 0 | 200 | E | | | | | | 212 | | | | | | | |
| 067 | | | | | -5 | -200 | E | | | | | | 213 | | | | | | | |
| 068 | | | | | 5 | 0 | E | | | | | | 214 | | | | | | | |
| 069 | | | | | 5 | 200 | E | | | | | | 215 | | | | | | | |

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|--|----|----|----|----|----|----|----|----|----|----|----|----|
| 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| CA | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| COEFFICIENTS | | | | | | | | | | | | 6 |
| SCHEDULES | | | | | | | | | | | | 6 |
| A OR B | | | | | | | | | | | | 6 |
| B) 0, 100, 200, 300, 400, 600, 800, 1000, 1200 INCHES (FS) | | | | | | | | | | | | 6 |
| E) 600, 800, 1000, 1200 | | | | | | | | | | | | 6 |

~~EXTERNAL TANK SEPARATION DATA~~

TABLE II. (Continued)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

EXTERNAL TANK SEPARATION DATA

TEST : IA 13

TABLE II. (Continued)

DATE : POST-TEST

DATA SET / RUN NUMBER COLLATION SUMMARY

TEST RUN NUMBERS

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | NO. OF RUNS | MACH-NUMBERS | | | | |
|---------------------|---------------------------------|-------|-----|-------------------|-----|------|------|------|----|-----|-----|-------------|---|-----------|-------|-----|------|
| | | a | b | Dα | DB | Y | Z | MACH | PT | DEL | DER | | RF | X | 400 | 800 | 1200 |
| RTJ 070 | O _g /T _{ro} | -5 | 0 | 0 | 0 | -200 | F | 452 | 80 | +10 | -10 | 0 | | | 216 | | |
| 071 | | | | | | 0 | F | | | | | | | | 217 | | |
| 072 | | | | | | 200 | F | | | | | | | | 218 | | |
| 073 | | | | | | -5 | -200 | F | | | | | | | 219 | | |
| 074 | | | | | | 5 | 0 | F | | | | | | | 220 | | |
| 075 | | | | | | 200 | F | | | | | | | | 221 | | |
| 076 | | | | -10 | 0 | -200 | D | | | | | | | | 222 | | |
| 077 | | | | | | 0 | D | | | | | | | | 223 | | |
| 078 | | | | | | 200 | D | | | | | | | | 224 | | |
| 079 | | | | | | -5 | -200 | D | | | | | | | 225 | | |
| 080 | | | | | | 5 | 0 | D | | | | | | | 226 | | |
| 081 | | | | | | 200 | D | | | | | | | | 227 | | |
| 082 | | | | -20 | 0 | -200 | E | | | | | | | | 228 | | |
| 083 | | | | | | 0 | E | | | | | | | | 229 | | |
| 084 | | | | | | 200 | E | | | | | | | | 230 | | |
| 085 | | | | | | -5 | -200 | E | | | | | | | 231 | | |
| 086 | | | | | | 5 | 0 | E | | | | | | | 232 | | |
| 087 | | | | | | 200 | E | | | | | | | | 233 | | |
| | | | | | | | | | | | | | 61 | 67 | 75 76 | | |
| CN | CLM | KY | CYN | ICBL | ICA | | | | | | | | | | X | IZ | NDV |
| | | | | | | | | | | | | | IDVAR (1) | IDVAR (2) | IDV | | |
| | | | | | | | | | | | | | E] = 600, 800, 1000, 1300 | | | | |
| | | | | | | | | | | | | | D] = 300, 400, 600, 800, 1000, 1300 INCHES (FULL SCALE) | | | | |
| | | | | | | | | | | | | | F] = 0, 100, 200, 300, 400, 600, 800 | | | | |
| | | | | | | | | | | | | | SCHEDULES | | | | |

COEFFICIENTS
TAKENES (FULL SCALE)

$$E] = 600,800,1000,1300$$

COEFFICIENT

$D) = 300, 400, 600, 800, 1000, 1300, 1600, 2000$

$E) = 0, 100, 200, 300, 400, 600, 800$

$\alpha, \beta, \text{DO}, \text{DB} - \text{DEGREES}; \text{X.Y} - \text{INCHES (FULL SCALE)}; \text{DEL, DER} - \text{DEGREES}; \text{DT-PSIA}; \text{RF} - \text{DEGREES (RUGGER FLARE)}$

EXTERNAL TANK SEPARATION DATA

TABLE II. (Continued)

TEST: 1A:13

DATE: POST-TEST

DATA SET/RUN NUMBER COLLATION SUMMARY

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | TEST RUN NUMBERS | | | | | |
|---------------------|---------------|-------|---|-------------------|----|-----|---|-----|-----|-----|-----|----|------------------|-------------|------------------|-----|------|--|--|--|
| | | α | β | DX | DB | Y | Z | MM | PT | DEL | DER | RF | X — MACH NUMBERS | | | | | | | |
| | | | | | | | | | | | | | 0 | | 400 | 800 | 1200 | | | |
| RTJ 088 | 09/T10 | 0 | 0 | 0 | 0 | 0 | B | 453 | 110 | +10 | +10 | 0 | 234 | 235 | 236 | 237 | | | | |
| 089 | | | | -10 | | | D | | | | | | 238 | 239 | 240 | 241 | | | | |
| 090 | | | | -20 | | | E | | | | | | 242 | 243 | 244 | 245 | | | | |
| 091 | | | | 0 | | 200 | B | | | | | | 246 | 247 | 248 | 249 | | | | |
| 092 | | | | -10 | | | D | | | | | | 250 | 251 | 252 | 253 | | | | |
| 093 | | | | -20 | | | E | | | | | | 254 | 255 | 256 | 257 | | | | |
| 094 | | | | 0 | | | B | | | | | | 258 | 259 | 260 | 261 | | | | |
| 095 | | | | -10 | | | D | | | | | | 262 | 263 | 264 | 265 | | | | |
| 096 | | | | -20 | | | E | | | | | | 266 | 267 | 268 | 269 | | | | |
| 097 | | | | 0 | | 0 | B | | | | | | 270 | 271 | 272 | 273 | | | | |
| 098 | | | | -10 | | | D | | | | | | 274 | 275 | 276 | 277 | | | | |
| 099 | | | | -20 | | | E | | | | | | 278 | 279 | 280 | 281 | | | | |
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1 7 13 19 25 31 37 43 49 55 61 67 73 76

CM KLM KX N KBL CA COEFFICIENTS

α OR β θ = 0, 100, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE) Δ = 300, 400, 600, 800, 1000, 1500

Z SCHEDULES E = 600, 800, 1000, 1300

10VAR (1) 10VAR (2) NDV

α, β, DX, DB - DEGREES ; X, Y - INCHES (FULL SCALE) ; DEL, DER - DEGREES ; PT - PSIA ; RF - DEGREES (RUDDER FLARE)

Booster (SRB) Separation

TABLE II. (Continued)

TEST: 1A13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

| DATE SET / RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: POST-TEST | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---------------|---|---------|-------------------|-----|-----|------|------|-----------------|----|-------------|------------------|-----|-----|-----|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | NO. OF RUNS | X - MACH NUMBERS | | | | TEST RUN NUMBERS | | | | | | | | | | | | | | | |
| | | | α | β | DB | Y | Z | MMH | PT | PCH | RF | | 0 | 300 | 600 | 900 | | | | | | | | | | | | | | | | |
| RTJ 100 | | 09 T10 / S8 | 0 | 0 | 0 | 0 | A | 4.48 | 11.6 | 1500 | 0 | | 303 | 304 | 305 | - | | | | | | | | | | | | | | | | |
| 101 | | (PLUMES ON) | | | | 200 | A | 4.51 | 29 | 750 | | | - | - | 306 | - | | | | | | | | | | | | | | | | |
| 102 | | | | | | 0 | A | | | | | | 307 | 308 | 309 | 310 | | | | | | | | | | | | | | | | |
| 103 | | | | | | 200 | A | | | | | | 314 | 313 | 312 | 311 | | | | | | | | | | | | | | | | |
| 104 | | | | | | 400 | A | | | | | | 315 | 316 | 317 | 318 | | | | | | | | | | | | | | | | |
| 105 | | | | | | 800 | 800 | | | | | | 319 | 320 | 321 | 322 | | | | | | | | | | | | | | | | |
| 106 | | | | | | 0 | A | | | 1500 | | | 323 | 324 | 325 | 326 | | | | | | | | | | | | | | | | |
| 107 | | | | | | 200 | A | | | | | | 330 | 329 | 328 | 327 | | | | | | | | | | | | | | | | |
| 108 | | | | | | 400 | A | | | | | | 331 | 332 | 333 | 334 | | | | | | | | | | | | | | | | |
| 109 | | | | | | 800 | 800 | | | | | | 335 | 336 | 337 | 338 | | | | | | | | | | | | | | | | |
| 110 | | | | | | 0 | A | 4.52 | 58 | | | | 339 | 340 | 341 | 342 | | | | | | | | | | | | | | | | |
| 111 | | | | | | 200 | A | | | | | | 346 | 345 | 344 | 343 | | | | | | | | | | | | | | | | |
| 112 | | | | | | 400 | A | | | | | | 347 | 348 | 349 | 350 | | | | | | | | | | | | | | | | |
| 113 | | | | | | 800 | 800 | | | | | | 351 | 352 | 353 | 354 | | | | | | | | | | | | | | | | |
| 114 | | | | | | 0 | A | 4.53 | 110 | | | | 355 | 356 | 357 | - | | | | | | | | | | | | | | | | |
| 115 | | | | | | 5 | A | | | | | | 358 | 359 | 360 | - | | | | | | | | | | | | | | | | |
| 116 | | | | | | 10 | A | | | | | | 361 | 362 | 363 | 364 | | | | | | | | | | | | | | | | |
| 117 | | | | | | 200 | A | | | | | | 368 | 367 | 366 | 365 | | | | | | | | | | | | | | | | |
| | | | 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 | 76 | | | | | | | | | | | | | | | | |
| | | | COEFFICIENTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (FULL SCALE) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | SCHEDULES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | RTJ 100 THROUGH RTJ 283 - ORBITER/TANK DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | RTJ 300 THROUGH RTJ 483 - SRB DATA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ROOSTER (SRB) SEPARATION

TABLE II. (Continued)

| DATE SET/RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: POST-TEST | | | | | | | | | | | | | | | | | | | | | | | |
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| DATA SET IDENTIFIER | | CONFIGURATION | | SCHD. | | PARAMETERS/VALUES | | | | | | | | NO. OF RUNS | | MAGN. NUMBERS | | | | | | TEST RUN NUMBERS | | | | | | | | | | | |
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TABLE II. (Continued)

Booster (SRB) Separation

TEST: IA/3

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | | TEST RUN NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--|---------------|----------|---------|-------------------|---------------|----------------|----------------|------------------|---------------|--------------|----------------|--------------|--------------|-------------|--------------|----------------|-----|-----|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | α | β | $\Delta\alpha$ | $\Delta\beta$ | $\Delta\gamma$ | $\Delta\delta$ | $\Delta\epsilon$ | $\Delta\zeta$ | $\Delta\eta$ | $\Delta\theta$ | $\Delta\phi$ | $\Delta\psi$ | | $\Delta\chi$ | $\Delta\omega$ | 0 | 300 | 600 | 900 | 0 | 300 | 600 | 900 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RTJ 136 | | 09T10/58 | 0 | 0 | -10 | 0 | 200 | DE | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 110 | 426 | 428 | 430 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 137 | | (RUNS OFF) | | | -20 | | 0 | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 73 | 79 |
| C.N. | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 |
| COEFFICIENTS | | | | | | | | | | | | | |
| A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 THRESH (ALL CASES) | | | | | | | | | | | | | |
| B) = 200, 300, 400, 600, 800, 1000 | | | | | | | | | | | | | |
| C) = 600, 800, 1000 | | | | | | | | | | | | | |
| D) = 300, 400, 600, 800, 1000 | | | | | | | | | | | | | |
| E) = 400, 600, 800, 1000 | | | | | | | | | | | | | |
| F) = 50, 100, 150, 200, 300, 400, 600, 800, 1000 | | | | | | | | | | | | | |
| G) = 100, 150, 200, 300, 400, 600, 800, 1000 | | | | | | | | | | | | | |
| H) = 400, 600, 800, 1000 | | | | | | | | | | | | | |

BOOSTER (SERB) SEPARATION

TABLE II. (Continued)

TEST: JA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | X - MACH NUMBERS | | | | TEST RUN NUMBERS | | | | | | | | | | |
|---------------------|--|---------------|-------|---|-------------------|-----|-------------|------|------|------|------|----|-----|-----|-------------|------------------|---|-----|-----|------------------|-----|-----|--|--|--|--|--|--|--|--|
| | | | a | B | DB | Y | Z | MACH | PT | PEH | RF | 0 | 300 | 600 | | 900 | 0 | 300 | 600 | 900 | | | | | | | | | | |
| RTJ 154 | | 09 T10/S8 | 0 | 0 | 0 | 0 | H | 4.53 | 110 | - | 0 | | 495 | 496 | 499 | 500 | | 495 | 496 | 499 | 500 | | | | | | | | | |
| 155 | | (PLUMES OFF) | ↓ | ↓ | ↓ | 200 | H,A* | ↓ | ↓ | ↓ | | | 498 | 497 | 502 | 501 | | 498 | 497 | 502 | 501 | | | | | | | | | |
| 158 | | (PLUMES ON) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 159 | | | | | | 5 | 0 | B | 4.51 | 28.9 | 1500 | | | | | | | 511 | - | - | - | 514 | | | | | | | | |
| 160 | | | | | ↓ | 200 | B | | | | | | | | | | | 512 | - | - | - | 515 | | | | | | | | |
| 161 | | | | | ↓ | 400 | B | | | | | | | | | | | 513 | - | - | - | 516 | | | | | | | | |
| 162 | | | | | -5 | 0 | C,A* | | | | | | | | | | | 527 | 525 | 517 | 518 | | | | | | | | | |
| 163 | | | | | ↓ | 200 | A,C | | | | | | | | | | | 528 | 519 | 520 | 521 | | | | | | | | | |
| 164 | | | | | ↓ | 400 | A | | | | | | | | | | | 526 | 524 | 523 | 522 | | | | | | | | | |
| 165 | | | | | ↓ | 800 | 800 | | | | | | | | | | | 529 | 530 | 531 | 532 | | | | | | | | | |
| 166 | | | | | -10 | ↓ | ↓ | | | | | | | | | | | 533 | 534 | 535 | 536 | | | | | | | | | |
| 167 | | | | | ↓ | 400 | A | | | | | | | | | | | 537 | 538 | 539 | 540 | | | | | | | | | |
| 168 | | | | | ↓ | 0 | D,E,F** | | | | | | | | | | | 541 | 543 | 545 | 548 | | | | | | | | | |
| 169 | | | | | ↓ | 200 | D,E,C**A*** | | | | | | | | | | | 542 | 544 | 546 | 547 | | | | | | | | | |
| 170 | | | | | -20 | 0 | G | | | | | | | | | | | 549 | 550 | 551 | 552 | | | | | | | | | |
| 171 | | | | | ↓ | 200 | G | | | | | | | | | | | 556 | 555 | 554 | 553 | | | | | | | | | |
| 172 | | | | | ↓ | 400 | G | | | | | | | | | | | 557 | 558 | 559 | 560 | | | | | | | | | |
| | | | | | ↓ | 800 | 800 | | | | | | | | | | | 561 | 562 | 563 | 564 | | | | | | | | | |
| | | | | | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 73 | 76 | | | | | | | | | | | | | | |

| Z SCHEDULES | COEFFICIENTS | | | | | | | | | | | | ICVAR (1) ICVAR (2) NDV | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A) | B) | C) | D) | E) | F) | G) | H) | I) | J) | K) | L) | M) | N) | O) | P) | Q) | R) |
| 1 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 | 0.50, 100, 150, 200, 300, 400, 600, 800, 1000 |

A) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 B) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 C) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 D) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 E) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 F) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 G) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 H) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 I) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 J) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 K) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 L) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 M) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 N) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 O) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 P) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 Q) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000
 R) = 0.50, 100, 150, 200, 300, 400, 600, 800, 1000

BOOSTER (SEP) SEPARATION

TABLE II. (Continued)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

TEST: IA13

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | | TEST RUN NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--|---------------|-------|---|-------------------|----|---|---|------|-----|-----|----|---|-----|-------------|--------------|-----|-----|---|------------------|---|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | a | B | DX | DY | Y | Z | MACH | PT | PCH | RF | 0 | 300 | | 600 | 900 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RTJ 173 | | Op Tr 0/58 | 0 | 0 | 5 | 5 | 0 | B | | 453 | 110 | — | 0 | | | | | 565 | — | — | — | 568 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| GA | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 |
| COEFFICIENTS | | | | | | | | | | | | | |
| SCHEDULES | | | | | | | | | | | | | |
| A) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 INCHES (AIRSQUE) | | | | | | | | | | | | | |
| B) = 0, 50, 100, 150, 200, 300, 400, 600, 800, 1000 | | | | | | | | | | | | | |
| C) = 50, 100, 150, 200, 300, 400, 600, 800, 1000 | | | | | | | | | | | | | |
| D) = 400, 600, 800, 1000 | | | | | | | | | | | | | |
| E) = 200, 300, 400, 600 | | | | | | | | | | | | | |

Booster (SRB) Separation

TABLE II. (Continued)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

TEST: JTA13

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | NO. OF RUNS | TEST RUN NUMBERS | | | | | |
|---------------------|---------------|-------|---|-------------------|----|-----|--------------|-------|-------|-------------|------------------|-----|-----|-----|-----|---|
| | | A | B | DA | DB | Y | Z | MAK | PT | PCH | RF | 0 | 300 | 600 | 900 | X |
| RTJ 191 | 09 Tio / S8 | 0 | 0 | -5 | -5 | 200 | C, A* | 4.53 | 110 | - | 0 | 601 | 602 | 605 | 606 | |
| 192 | (PLUMES OFF) | | | | | 400 | A | | | | | 603 | 604 | 608 | 607 | |
| 193 | | | | | | 800 | 800 | | | | | 609 | 610 | 611 | 612 | |
| 194 | | | | | | -10 | | | | | | 613 | 614 | 615 | 616 | |
| 195 | | | | | | 400 | A, C* | | | | | 620 | 617 | 618 | 619 | |
| 196 | | | | | | 200 | I, C*, E** | | | | | 621 | 622 | 623 | 624 | |
| 197 | | | | | | 0 | H | | | | | 625 | 626 | 627 | 628 | |
| 198 | | | | | | -20 | H | | | | | 629 | 630 | 631 | 632 | |
| 199 | | | | | | 200 | H, I, E** | | | | | 633 | 634 | 635 | 636 | |
| 200 | | | | | | 400 | H, C*, E** | | | | | 641 | 642 | 643 | 644 | |
| 201 | | | | | | 800 | 800 | | | | | 645 | - | - | 646 | |
| 202 | | | | | | -10 | 5 | 0 | D, A* | | | 647 | - | - | 648 | |
| 203 | | | | | | 200 | D, A* | | | | | 651 | 652 | 653 | 654 | |
| 204 | | | | | | 400 | A | | | | | 662 | 659 | 658 | 655 | |
| 205 | | | | | | -5 | 0 | G, A* | | | | 661 | 660 | 657 | 656 | |
| 206 | | | | | | 200 | A, C, D, E** | | | | | 663 | 664 | 665 | 666 | |
| 207 | | | | | | 400 | A, E*, F** | | | | | | | | | |
| 208 | | | | | | 800 | 800 | | | | | | | | | |

| SCHEDULES | COEFFICIENTS | | | | | | | | | | | | | | | |
|-----------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 73 | 75 | 76 | 77 | 78 |
| 1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 |
| 2 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 | 15.1 |

A) = 0.5, 100, 150, 200, 300, 400, 600, 800, 1000
 B) = 200, 300, 400, 600, 800, 1000
 C) = 150, 100, 150, 200, 300, 400, 600, 800, 1000
 D) = 100, 150, 200, 300, 400, 600, 800, 1000
 E) = 600, 800, 1000
 F) = 300, 400, 600, 800, 1000

TABLE II. (Continued)

TEST: IAI3

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: PASTEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | |
|---------------------|--------------|---------------|-------|---|-------------------|-----|-----|------------|---------|---|------|-----|-----|----|-------------|--------------|-----|-----|-----|
| | | | | | α | β | DOX | DB | Y | Z | MACH | PT | PCH | RF | | 0 | 300 | 600 | 900 |
| | | | | | | | | | | | | | | | | | | | |
| RTJ 209 | Q9 Tr01/58 | | 0 | 0 | -10 | -10 | 800 | 800 | | | 4.53 | 110 | - | | 0 | 667 | 668 | 669 | 670 |
| 210 | (PLUMES OFF) | | | | | | 400 | A, D, E, I | | | | | | | | 680 | 677 | 676 | 671 |
| 211 | | | | | | | 200 | D, H, I | | | | | | | | 679 | 678 | 672 | 673 |
| 212 | | | | | | | 0 | I, G, H | | | | | | | | 681 | 682 | 675 | 674 |
| 213 | | | | | | | -20 | H, G | | | | | | | | 689 | 690 | 683 | 684 |
| 214 | | | | | | | | 200 | D, G, H | | | | | | | 692 | 691 | 688 | 685 |
| 215 | | | | | | | | 400 | D, G, H | | | | | | | 694 | 693 | 687 | 686 |
| 216 | | | | | | | | 800 | 800 | | | | | | | 695 | 696 | 697 | 698 |
| 217 | | | | | | | -20 | 5 | 0 | G | | | | | | 699 | - | - | 702 |
| 218 | | | | | | | | 200 | G | | | | | | | 700 | - | - | 703 |
| 219 | | | | | | | | 400 | G | | | | | | | 701 | - | - | 704 |
| 220 | | | | | | | -5 | 0 | G, M | | | | | | | 714 | 713 | 705 | 706 |
| 221 | | | | | | | | 200 | G, M | | | | | | | 715 | 711 | 708 | 707 |
| 222 | | | | | | | | 400 | G | | | | | | | 716 | 712 | 709 | 710 |
| 223 | | | | | | | | 800 | 800 | | | | | | | 717 | 718 | 719 | 720 |
| 224 | | | | | | | -10 | | | | | | | | | 721 | 722 | 723 | 724 |
| 225 | | | | | | | | 0 | G, M | | | | | | | 734 | 733 | 725 | 726 |
| 226 | | | | | | | | 200 | G | | | | | | | 735 | 731 | 728 | 727 |

[illegible]

| | |
|----------------------------|---------------------------------|
| $H) = 400, 600, 800, 1000$ | $I) = 300, 400, 600, 800, 1000$ |
| $J) = 600, 800, 1000$ | $K) = 800, 1000$ |
| $M) = 800, 1000$ | |

Booster (SEP) Separation

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POSTTEST

| TEST RUN NUMBERS | | | | | | | | | | | | | | | | | | | |
|---------------------|---------------|----------|---------|-------------------|-----|-----|-------------------------------------|------|-----|-----|----|-------------------|-------------------|-------------|------------------|-----|--|--|--|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | X — MACH-NUMBERS | | | | |
| | | α | β | Dx | DB | Y | Z | MACH | PT | PCN | RF | 0 | 300 | | 600 | 900 | | | |
| RTJ 227 | 09 T10/S8 | 0 | 0 | -20 | -10 | 400 | 0.5 M ₁₀₀₀ ⁴⁰ | 1.53 | 110 | - | 0 | 736 ⁴⁰ | 732 ⁴⁰ | 729 | 730 | | | | |
| 228 | (PLUMES OFF) | | | | -20 | 0 | M | | | | | 737 | 738 | 743 | 744 | | | | |
| 229 | | | | | | 200 | M | | | | | 740 | 739 | 746 | 745 | | | | |
| 230 | | | | | | 400 | M | | | | | 741 | 742 | 747 | 748 | | | | |
| 231 | | | | | | 800 | 800 | | | | | 749 | 750 | 751 | 752 | | | | |
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| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| CH | IC | LA | ISY | ISYN | ISO | ISA | ISCA | ISCA | ISCA | ISCA | ISCA | ISCA | ISCA |
| COEFFICIENTS | | | | | | | | | | | | | |
| SCHEDULES | | | | | | | | | | | | | |
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TABLE II. (Continued)

ROCKET (SPB) SEPARATION

TEST: IA/3

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH-NUMBERS | | | | | | | TEST RUN NUMBERS | | | | | | |
|---------------------|---------------|----------|---------|-------------------|----------|--------|----------------|------|----|-----|----|------|------|-------------|--------------|-----|-----|-----|--|--|--|------------------|--|--|--|--|--|--|
| | | α | β | $D\alpha$ | $D\beta$ | χ | ϵ | MACH | PT | RCH | RF | 0 | 200 | | 400 | 800 | | | | | | | | | | | | |
| RTJ 232 | 09 Tio/58 | 0 | 5 | 5 | 5 | 0 | B | | | | | 4.51 | 28.9 | 1500 | 0 | 853 | 854 | 855 | | | | | | | | | | |
| 233 | (RUNS ON) | | | | 0 | | B | | | | | | | | | 858 | 857 | 856 | | | | | | | | | | |
| 234 | | | | | -5 | | J,B* | | | | | | | | | 899 | 902 | 903 | | | | | | | | | | |
| 235 | | | | | -10 | | J,B* | | | | | | | | | 900 | 925 | 924 | | | | | | | | | | |
| 236 | | | | | -20 | | J | | | | | | | | | 901 | 942 | 943 | | | | | | | | | | |
| 237 | | | | 0 | 5 | | A | | | | | | | | | 859 | 860 | 861 | | | | | | | | | | |
| 238 | | | | | 0 | | A, 800* | | | | | | | | | 864 | 863 | 862 | | | | | | | | | | |
| 239 | | | | | -5 | | H, A, 800** | | | | | | | | | 906 | 904 | 905 | | | | | | | | | | |
| 240 | | | | | -10 | | H, D, A, 800** | | | | | | | | | 909 | 926 | 927 | | | | | | | | | | |
| 241 | | | | | -20 | | H, I, 800** | | | | | | | | | 910 | 941 | 940 | | | | | | | | | | |
| 242 | | | | -5 | 5 | | C, A* | | | | | | | | | 865 | 866 | 869 | | | | | | | | | | |
| 243 | | | | | 0 | | C, A, 800* | | | | | | | | | 868 | 867 | 872 | | | | | | | | | | |
| 244 | | | | | -5 | | H, C, A, 800** | | | | | | | | | 907 | 912 | 913 | | | | | | | | | | |
| 245 | | | | | -10 | | H, C, A, 800** | | | | | | | | | 908 | 929 | 928 | | | | | | | | | | |
| 246 | | | | | -20 | | H, 800* | | | | | | | | | 911 | 938 | 939 | | | | | | | | | | |
| 247 | | | | -10 | 5 | | D, A* | | | | | | | | | 873 | 874 | 870 | | | | | | | | | | |
| 248 | | | | | 0 | | D, A, 800** | | | | | | | | | 876 | 875 | 871 | | | | | | | | | | |
| 249 | | | | | -5 | | E, D, F, 800** | | | | | | | | | 916 | 915 | 914 | | | | | | | | | | |
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| COEFFICIENTS | IC (AR 11) IC (AR 12) NOV | | | | | | | | | | | | |
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Booster (SRB) Separation

TABLE II. (Continued)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: Post-Test

TEST: IA/3

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | | | TEST RUN NUMBERS |
|---------------------|---------------|----------|---------|-------------------|-----|---|----------------|--|------|------|------|----|-----|-------------|--------------|-----|-----|--|--|------------------|
| | | α | β | DA | DB | X | Z | | MACH | PT | PCN | RF | 0 | | 200 | 400 | 800 | | | |
| RTJ 250 | Op To / Sr | 0 | 5 | -10 | -10 | 0 | G, H, 1, 800** | | 4.51 | 28.9 | 1500 | 0 | 917 | 930 | 931 | 932 | ✓ | | | |
| 251 | (PLUMES ON) | | | ↓ | -20 | | G, 800* | | | | | | 918 | 936 | 937 | 896 | ✓ | | | |
| 252 | | | | -20 | 5 | | G | | | | | | 877 | 878 | 879 | | ✓ | | | |
| 253 | | | | | 0 | | G, 800* | | | | | | 882 | 880 | 881 | 886 | ✓ | | | |
| 254 | | | | | -5 | | M, G, 800* | | | | | | 919 | 922 | 923 | 887 | ✓ | | | |
| 255 | | | | | -10 | | M, 800* | | | | ↓ | | 920 | 932 | 933 | 897 | ✓ | | | |
| 256 | ↓ | | | ↓ | -20 | | M, 800* | | | | ↓ | | 921 | 935 | 934 | 895 | ✓ | | | |
| 257 | (PLUMES OFF) | | | 0 | 0 | | A | | | | — | | 945 | — | — | — | ✓ | | | |
| ↓ 258 | ↓ | ↓ | ↓ | ↓ | 5 | ↓ | A | | ↓ | ↓ | ↓ | | 944 | — | — | — | ✓ | | | |
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| | | | | | | | | | | | | | | | | | ✓ | | | |
| | | | | | | | | | | | | | | | | | ✓ | | | |
| | | | | | | | | | | | | | | | | | ✓ | | | |
| | | | | | | | | | | | | | | | | | ✓ | | | |
| | | | | | | | | | | | | | | | | | ✓ | | | |
| | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75.76 |
| CA | 164 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 | 154 |
| COEFFICIENTS | | | | | | | | | | | | 6 |
| α OR β SCHEDULES | | | | | | | | | | | | NOV |

BOOSTER (S.R.B.) SEPARATION

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | MACH NUMBERS | | | | |
|---------------------|-------------|---------------|-------|----|-------------------|-----|-----|-----------------|---|---|------|------|------|----|-------------|--------------|-------|-------|------|--|
| | | | | | α | β | Dx | Dy | X | Z | MMA | PT | PCH | RF | | 0 | 200 | 400 | 800 | |
| | | | | | | | | | | | | | | | | | | | | |
| RTJ 259 | 09 T10 / 58 | | 0 | -5 | 5 | 5 | 0 | B | | | 4.51 | 28.9 | 1500 | 0 | | 1041 | 1042 | 1043 | - | |
| 260 | (PLUMES ON) | | | | | 0 | | B | | | | | | | | 1046 | 1045 | 1044 | - | |
| 261 | | | | | | | | J, B* | | | | | | | | 1091 | 1094* | 1093* | - | |
| 262 | | | | | | | | J, K*, B** | | | | | | | | 1092 | 1115* | 1114* | - | |
| 263 | | | | | | 1 | | J, K* | | | | | | | | 1093 | 1132 | 1133* | - | |
| 264 | | | | | | 0 | 5 | A, 800* | | | | | | | | 1047 | 1048 | 1049 | 1071 | |
| 265 | | | | | | | | A, 800* | | | | | | | | 1052 | 1051 | 1050 | 1078 | |
| 266 | | | | | | | -5 | H, A*, 800** | | | | | | | | 1098 | 1096* | 1097* | 1077 | |
| 267 | | | | | | | -10 | H, D*, 800** | | | | | | | | 1101 | 1116* | 1117* | 1086 | |
| 268 | | | | | | 1 | -20 | H, 800* | | | | | | | | 1102 | 1131 | 1130 | 1087 | |
| 269 | | | | | | -5 | 5 | C, A*, 800* | | | | | | | | 1053 | 1054 | 1057 | 1072 | |
| 270 | | | | | | | 0 | C, A*, 800* | | | | | | | | 1056 | 1055 | 1060 | 1077 | |
| 271 | | | | | | | -5 | H, C, A*, 800** | | | | | | | | 1099 | 1104 | 1105 | 1088 | |
| 272 | | | | | | | -10 | H, I*, 800* | | | | | | | | 1100 | 1117* | 1118* | 1085 | |
| 273 | | | | | | 1 | -20 | H, 800* | | | | | | | | 1103 | 1128 | 1129 | 1088 | |
| 274 | | | | | | -10 | 5 | D, A*, 800** | | | | | | | | 1061 | 1062 | 1058* | 1073 | |
| 275 | | | | | | | 0 | D, A*, 800* | | | | | | | | 1064 | 1063 | 1059* | 1076 | |
| 276 | | | | | | 1 | -5 | G, D, A*, 800** | | | | | | | | 1108 | 1107* | 1106* | 1087 | |

| | | | | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| 1 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |

| | | | |
|---------------------|----------|----------|-----|
| COEFFICIENTS | ICAR (1) | ICAR (2) | NOV |
| α OR β | | | |
| SCHEDULES | | | |

BOOSTER (S.R.B.) SEPARATION

TABLE II. (Continued)

TEST: IAI3

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POSTTEST

| DATA SET IDENTIFIER | | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | | | | | | | NO. OF RUNS | Y - MACH NUMBERS | | | | TEST RUN NUMBERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------|--|---------------|-------|--|-------------------|---|----|----|---|---|------|----|-----|----|-------------|------------------|-----|-----|-----|------------------|------|------|------|------|------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | | a | B | Dk | Dp | X | Z | MACH | PT | PCN | RF | | 0 | 200 | 400 | 800 | 1084 | 1089 | 1065 | 1070 | 1110 | 1111 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---------------------------|---|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 75 | 76 |
| SMITHSONIAN INSTITUTION | | | | | | | | | | | | | |
| COEFFICIENTS | | | | | | | | | | | | | |
| IC VAR (1) IC VAR (2) NDV | | | | | | | | | | | | | |
| SCHEDULES | | | | | | | | | | | | | |

ISOLATED ET Φ and Φ ET TABLE II. (Continued)

TEST: IA 13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE POST-TEST

| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | NO. OF RUNS | MACH NUMBERS | | | |
|---------------------|--------------------|-------|---|-------------------|-----|-----|-------------|--------------|----|----|----|
| | | A | B | Pt | DEL | DER | | 61 | 67 | 75 | 76 |
| RTJ 500 | T10 | A | 0 | 110 | - | - | | 4.53 | | | |
| T 501 | ↓ | A | 5 | 110 | - | - | | 282 | | | |
| RTJ 502 | Φ ₉ | B | 0 | 80 | -40 | -40 | | 283 | | | |
| T 503 | ↓ | | | | 10 | 10 | | 291 | | | |
| 504 | ↓ | | | | 110 | -10 | | 293 | | | |
| 505 | ↓ | | | | 0 | 0 | | 295 | | | |
| 506 | ↓ | | | | 0 | 0 | | 297 | | | |
| 507 | ↓ | | | | 0 | 0 | | 299 | | | |
| RTJ 508 | Φ ₉ T10 | B | 0 | 289 | 0 | 0 | | 301 | | | |
| 509 | ↓ | B | 5 | 289 | 0 | 0 | | 1136 | | | |
| | | | | | | | | 1134 | | | |

α OR β

SCHEDULES

COEFFICIENTS

A) -40, -30, -20, -15, -10, -5, 0, 5, 10

B) -11, -27, 40, 10

TEST RUN NUMBERS

61 67 75 76

DATA SET IDENTIFIER

CONFIGURATION

SCHD.

PARAMETERS/VALUES

NO. OF RUNS

MACH NUMBERS

61 67 75 76

α OR β

SCHEDULES

COEFFICIENTS

A) -40, -30, -20, -15, -10, -5, 0, 5, 10

B) -11, -27, 40, 10

TEST RUN NUMBERS

61 67 75 76

TABLE II. (Continued)

TEST: IA13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

[illegible]

| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 45 | 55 | 61 | 67 | 75 76 |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| SEA | SEA | SEA | SEA | SEA | SEA | SEA | SEA | SEA | SEA | SEA | SEA | SEA |
| <p>COEFFICIENTS</p> <p>α OR β SCHEDULES</p> <p>A) $-30^{\circ}-25^{\circ}-20^{\circ}-15^{\circ}-10^{\circ}-5^{\circ}, 0^{\circ}, 10^{\circ}, 15^{\circ}$</p> <p>B) $-30^{\circ}-25^{\circ}-20^{\circ}-15^{\circ}-10^{\circ}$</p> <p>C) $10, 15^{\circ}$</p> | | | | | | | | | | | | |
| <p>IDENTIFICATION</p> <p>ICVAR (1) ICVAR (2) NDV</p> | | | | | | | | | | | | |

TABLE II. (Concluded)

TEST: IA-13

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: POST-TEST

[illegible]

| 1 | 7 | 13 | 19 | 25 | 31 | 37 | 43 | 49 | 55 | 61 | 67 | 73 | 76 |
|--|-----|-----|------|----|----|----|----|----|----|------|-------|----|----|
| CN | FLA | 15Y | 15YM | | | | | | | MACH | ALPHA | 4 | |
| | | | | | | | | | | | | | |
| α OR β | | | | | | | | | | | | | |
| A) $-30^\circ \rightarrow 15^\circ$, $\Delta\delta = 5^\circ$ | | | | | | | | | | | | | |
| COEFFICIENTS | | | | | | | | | | | | | |
| DEVAR (1) DEVAR (2) NDV | | | | | | | | | | | | | |

SCHEDULES

TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY (R₁₉)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter fuselage

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER: VI70-000139B

| <u>DIMENSIONS:</u> | <u>FULL-SCALE</u> | <u>MODEL SCALE</u> |
|--|-------------------|--------------------|
| Length ~ in. | <u>1290.3</u> | <u>12.903</u> |
| Max. Width ~ in. (@ $X_0 = 1528.3$ in.) | <u>267.6</u> | <u>2.676</u> |
| Max. Depth ~ in. (@ $X_0 = 1480.52$ in.) | <u>244.5</u> | <u>2.445</u> |
| * Fineness Ratio | <u>4.846</u> | <u>4.846</u> |
| Area ~ ft. ² | | |
| Max. Cross-Sectional (@ $X_0 = 1480.52$ in.) | <u>386.67</u> | <u>0.03867</u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |

* Fineness Ratio is the fuselage length divided by the equivalent diameter for the maximum cross-sectional area.

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Canopy (C7)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter Canopy

Model Scale = 0.010

Model Drawing No. SS-A00062

DRAWING NUMBER

VL70-000139B

DIMENSION:

FULL SCALE

MODEL SCALE

Length ($X_0 = 433$ IN. to $X_0 = 670$ IN.)

237

2.370

Max Width

Max Depth

Fineness Ratio

Area

Max Cross-Sectional

Planform

Wetted

Base

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Elevon (E23)GENERAL DESCRIPTION: Configuration 3 lightweight orbiter elevonsData for (1) of (2) sidesModel Scale = 0.010Model Drawing No. SS-A00109DRAWING NUMBER: VL70-000139B

| <u>DIMENSIONS:</u> | <u>FULL-SCALE</u> | <u>MODEL SCALE</u> |
|--|-------------------|--------------------|
| Area ~ ft. ² | <u>205.52</u> | <u>0.02055</u> |
| Span (equivalent) ~ in. | <u>353.34</u> | <u>3.5334</u> |
| Inb'd equivalent chord ~ in. | <u>114.78</u> | <u>1.1478</u> |
| Outb'd equivalent chord ~ in. | <u>55.00</u> | <u>0.550</u> |
| Ratio movable surface chord/ total surface chord | | |
| At Inb'd equiv. chord | <u>0.208</u> | <u>0.208</u> |
| At Outb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| Sweep Back Angles, deg | | |
| Leading Edge | <u>0.00</u> | <u>0.00</u> |
| Tailing Edge | <u>-10.24</u> | <u>-10.24</u> |
| Hingeline | <u>0.00</u> | <u>0.00</u> |
| Area Moment (Normal to hinge line) ~ ft ³ | <u>1548.07</u> | <u>0.00155</u> |

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Body Flap (F₅)

GENERAL DESCRIPTION: Configuration 3 lightweight orbiter body flap

Model Scale = 0.010

Model Drawing No. SS-A00062

DRAWING NUMBER

VL70-000139E

DIMENSION:

FULL SCALE

MODEL SCALE

Length ~ in.

84.70

0.8470

Max Width ~ in.

267.6

2.6760

Max Depth

Fineness Ratio

Area ~ ft.²

Max Cross-Sectional

Planform

Wetted

Base

142.5195

0.01425195

38.0958

0.00380958

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: OMS Pod (M₁)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter Orbital
Maneuvering System Pod.

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER VL70-000139B

| <u>DIMENSION:</u> | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|---------------------|-------------------|--------------------|
| Length~in. | <u>346.0</u> | <u>3.460</u> |
| Max Width~in. | <u>108.0</u> | <u>1.080</u> |
| Max Depth~in. | <u>113.0</u> | <u>1.13</u> |
| Fineness Ratio | <u> </u> | <u> </u> |
| Area | <u> </u> | <u> </u> |
| Max Cross-Sectional | <u> </u> | <u> </u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: Rudder (R₅)

GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter rudder

Model Scale = 0.010 Model Drawing No. SS-A00062

DRAWING NUMBER: VL70-000139B
 VL70-000095

| <u>DIMENSIONS:</u> | <u>FULL-SCALE</u> | <u>MODEL SCALE</u> |
|---|-------------------|--------------------|
| Area~ft. ² | <u>106.38</u> | <u>0.010638</u> |
| Span (equivalent)~in. | <u>201.0</u> | <u>2.010</u> |
| Inb'd equivalent chord~in. | <u>91.585</u> | <u>0.91585</u> |
| Outb'd equivalent chord~in. | <u>50.833</u> | <u>0.50833</u> |
| Ratio movable surface chord/ total surface chord | | |
| At Inb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| At Outb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| Sweep Back Angles, deg. | | |
| Leading Edge | <u>34.83</u> | <u>34.83</u> |
| Tailing Edge | <u>26.25</u> | <u>26.25</u> |
| Hingeline | <u>34.83</u> | <u>34.83</u> |
| Area Moment (Normal to hinge line)~ft ³ | <u>526.13</u> | <u>0.00053</u> |

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: VERTICAL TAIL (V₇)

GENERAL DESCRIPTION: Configuration 3 lightweight orbiter vertical tail,
double wedge airfoil sections with rounded leading edge.

Model Scale = 0.010

Model Drawing No. SS-A00062

DRAWING NUMBER:

VL70-000139 B

VL70-000095.

DIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATA

| | | |
|----------------------------------|---------|---------|
| Area (Theo) ~ ft ² | 413.25 | 0.04132 |
| Planform | | |
| Span (Theo) ~ in. | 315.72 | 3.1572 |
| Aspect Ratio | 1.675 | 1.675 |
| Rate of Taper | 0.507 | 0.507 |
| Taper Ratio | .404 | .404 |
| Sweep Back Angles ~ deg. | | |
| Leading Edge | 45.000 | 45.000 |
| Trailing Edge | 26.249 | 26.249 |
| 0.25 Element Line | 41.130 | 41.130 |
| Chords: | | |
| Root (Theo) WP | 268.50 | 2.6850 |
| Tip (Theo) WP | 108.47 | 1.0847 |
| MAC | 199.61 | 1.9981 |
| Fus. Sta. of .25 MAC | 1463.50 | 14.6350 |
| W. P. of .25 MAC | 635.522 | 6.35522 |
| B. L. of .25 MAC | 0.00 | 0.00 |
| Airfoil Section | | |
| Leading Wedge Angle ~ deg. | 10.000 | 10.000 |
| Trailing Wedge Angle ~ deg. | 14.920 | 14.920 |
| Leading Edge Radius ~ in. | 2.00 | 0.020 |
| Void Area ~ ft ² | 13.17 | 0.0013 |
| Blanketed Area ~ ft ² | 12.67 | 0.0012 |

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: WING (W₁₀₇)GENERAL DESCRIPTION: Configuration 3 lightweight Orbiter wing

Model Scale = 0.010

Model Drawing No. SS-A00109

DWG. NO. VL70-000139BDIMENSIONS:FULL-SCALEMODEL SCALETOTAL DATAArea (Theo.) ~ ft²

Planform

Span (Theo) ~ in.

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, deg. (@ T.E. of Elevon)

Incidence Angle, deg.

Aerodynamic Twist, deg.

Sweep Back Angles, deg.

Leading Edge

Trailing Edge

0.25 Element Line

Chords: ~ in.

Root (Theo) B.P.O.O.

Tip, (Theo) B.P.

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

EXPOSED DATAArea (Theo) ~ ft²

Span, (Theo) ~ in. (From B.P. 108 in.)

Aspect Ratio

Taper Ratio

Chords: ~ in.

Root (@ B.P. 108)

Tip

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section (Rockwell Mod NASA)

XXXX-64

Root $\frac{T}{c} = @ Y_0 199$ to NAXA 0010Tip $\frac{T}{c} =$

Data for (1) of (2) Sides

Leading Edge Cuff

Planform Area ~ ft²

Leading Edge Intersects Fus M. L. @ Sta

Leading Edge Intersects Wing @ Sta

TABLE III. MODEL DIMENSIONAL DATA (CONTINUED)

MODEL COMPONENT: External Tank (T₁₀)

GENERAL DESCRIPTION: Configuration 3 External Oxygen Hydrogen Tank

Model Scale = 0.010 Model Drawing No. SS-A00108

DRAWING NUMBER VL72-000088
 VL78-000041

| <u>DIMENSION:</u> | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|-----------------------------------|-----------------------------|-----------------------------|
| Length~in. | <u>1865</u> | <u>18.65</u> |
| Max Diameter~in. | <u>324</u> | <u>3.24</u> |
| Max Depth | <u> </u> | <u> </u> |
| Fineness Ratio (Length/Max. Dia.) | <u>5.75617</u> | <u>5.75617</u> |
| Area~ft ² | | |
| Max Cross-Sectional | <u>572.555</u> | <u>0.05726</u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |

TABLE III. MODEL DIMENSIONAL DATA (CONCLUDED)

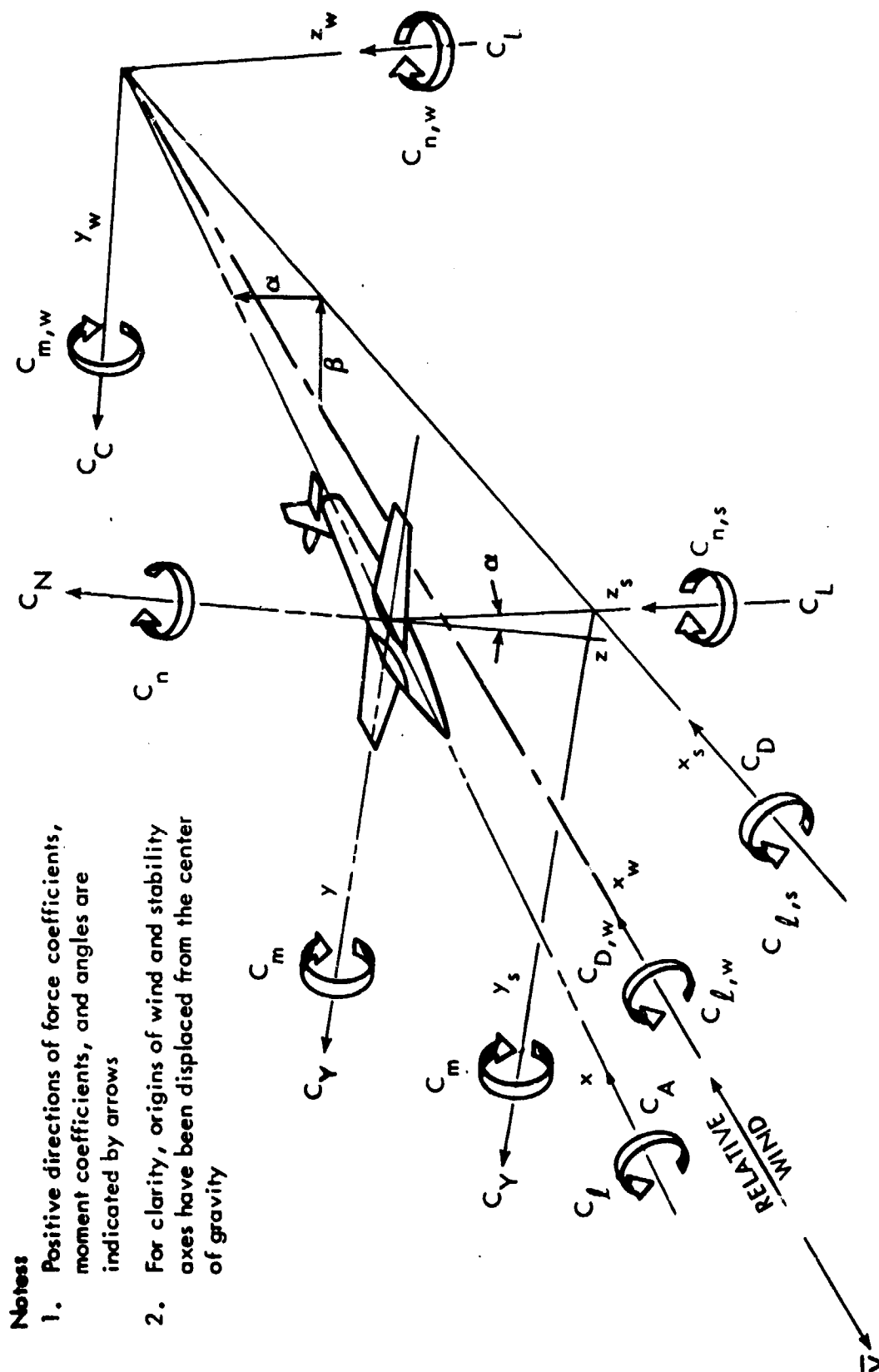
MODEL COMPONENT: Booster (S_B)

GENERAL DESCRIPTION: Configuration 3 Booster Solid Rocket Motor
Data for 1 of 2 Boosters

Model Scale 0.010 Model Drawing No. SSA-00113
 DRAWING NUMBER VL72-000088
 VL77-000036,

| <u>DIMENSION:</u> | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|--|-----------------------------|-----------------------------|
| Length (Includes Nozzle)~in. | <u>1741.0</u> | <u>17.410</u> |
| Max Width (Tank Dia.)~in. | <u>142.0</u> | <u>1.420</u> |
| Max Dia. (Max. Nozzle Shroud Dia.)~in. | <u>205.0</u> | <u>2.050</u> |
| * Fineness Ratio | <u>8.49268</u> | <u>8.49268</u> |
| Area~ft ² | | |
| Max Cross-Sectional (Nozzle Shroud) | <u>229.21</u> | <u>0.02292</u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |

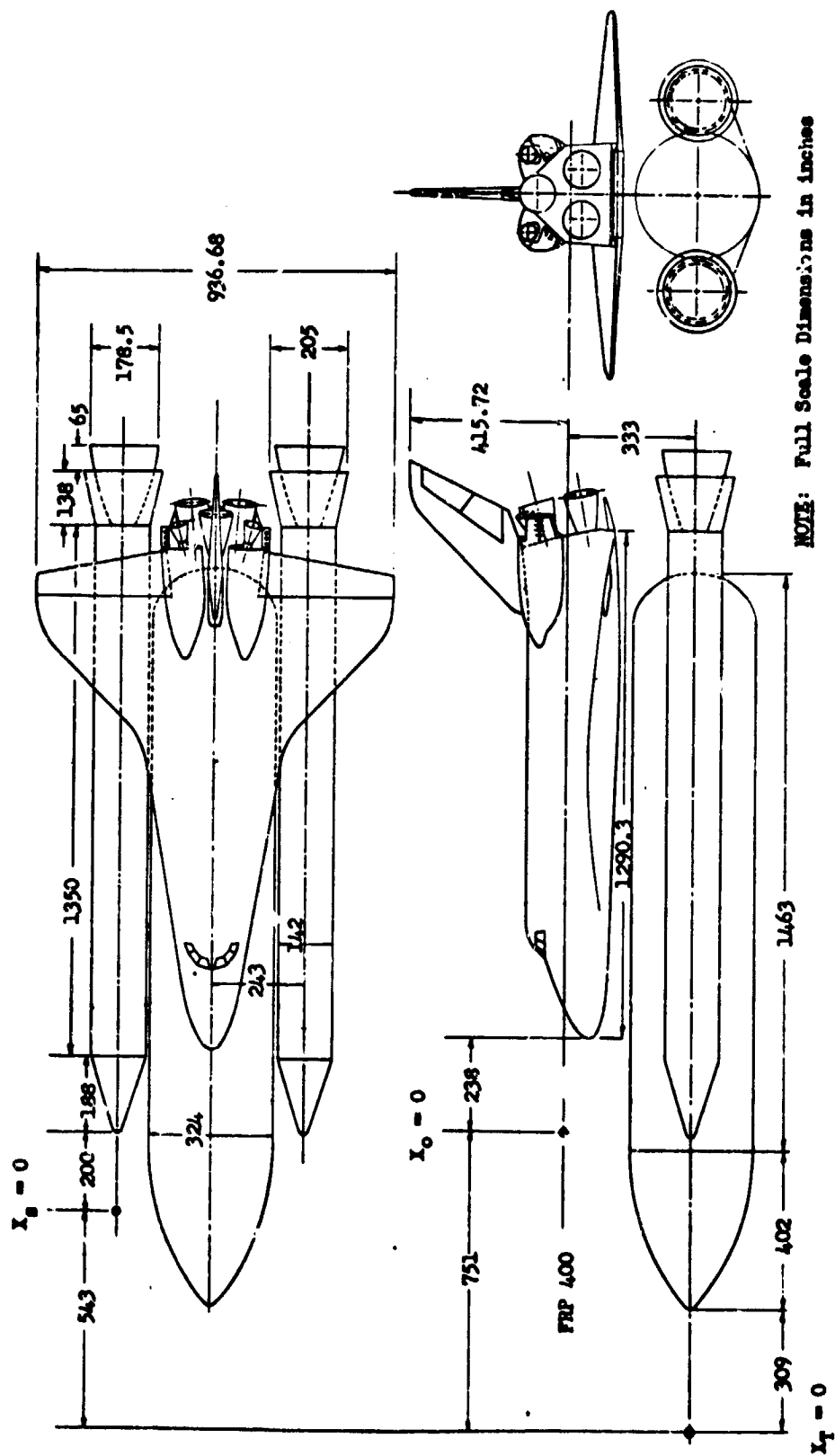
* Length divided by nozzle shroud diameter.



Notes

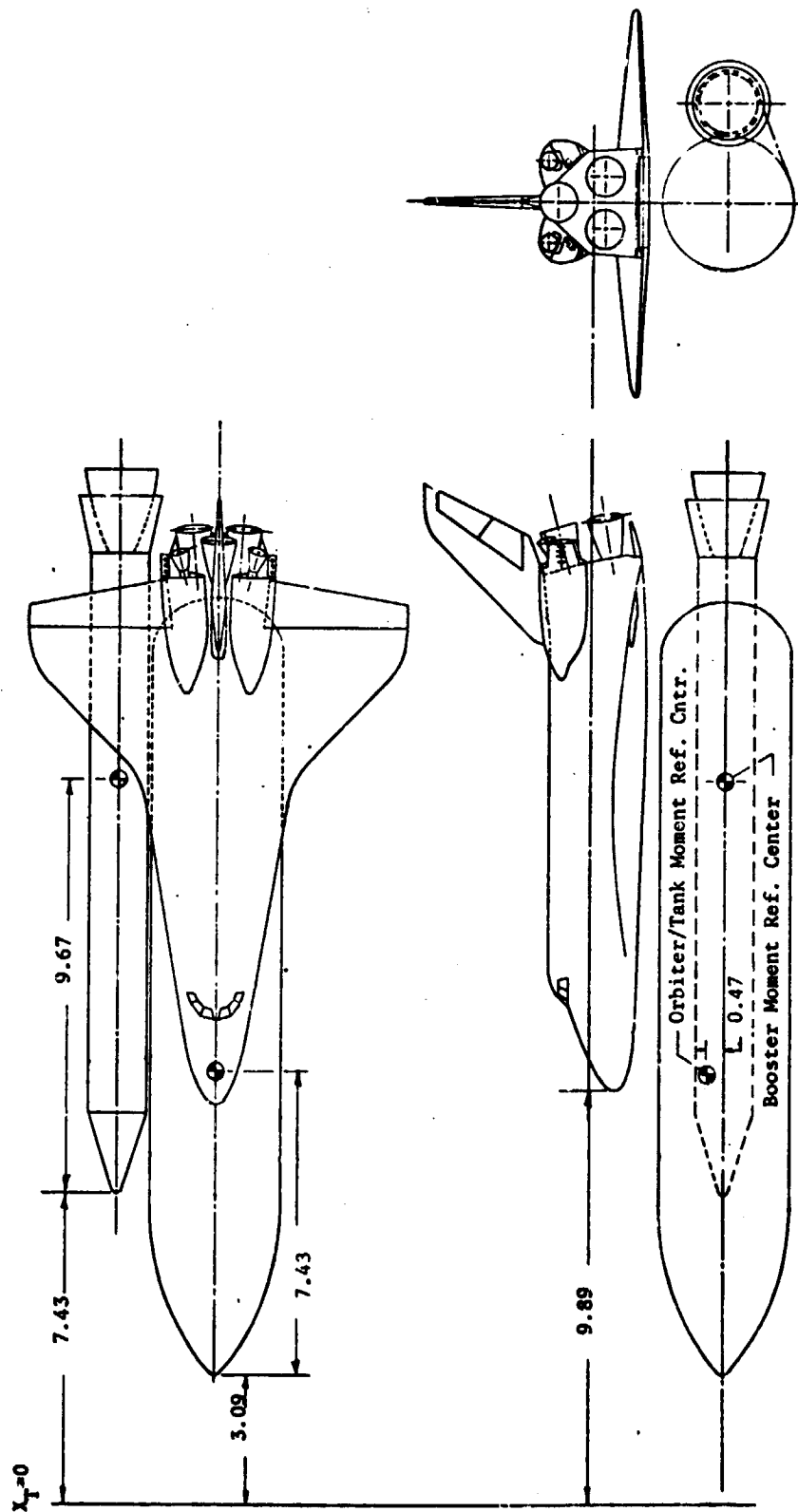
1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

Figure 1. Axis Systems



a. Integrated Vehicle Configuration 3 (Mated)

Figure 2. Model Sketches

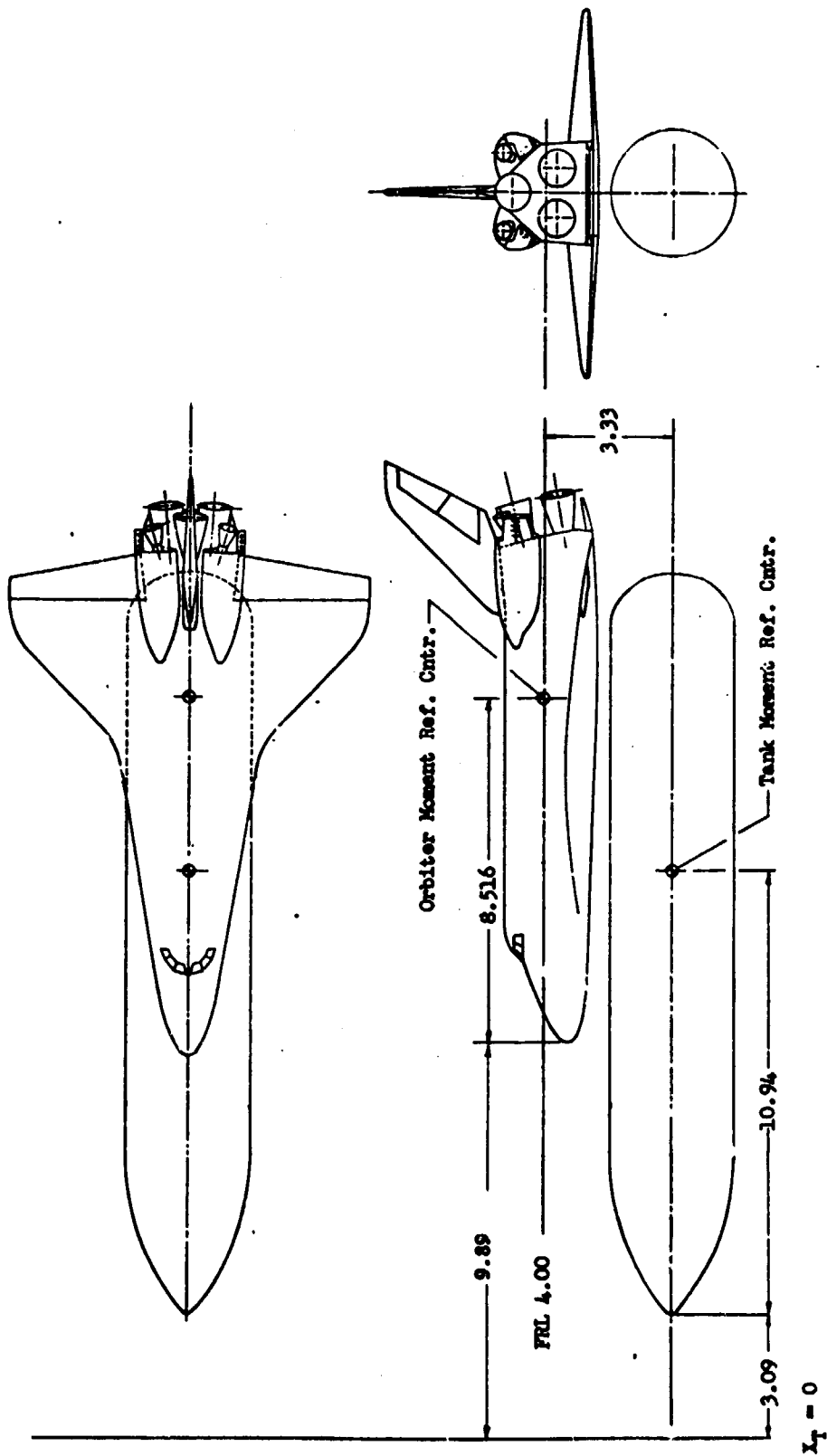


NOTES:

1. Only righthand booster used for Booster Separation testing.
2. Orbiter rigidly attached to tank.
3. Mated position shown.
4. All dimensions in inches.

b. Model 32-OTS Integrated Vehicle Configuration 3

Figure 2. - Continued



NOTES:

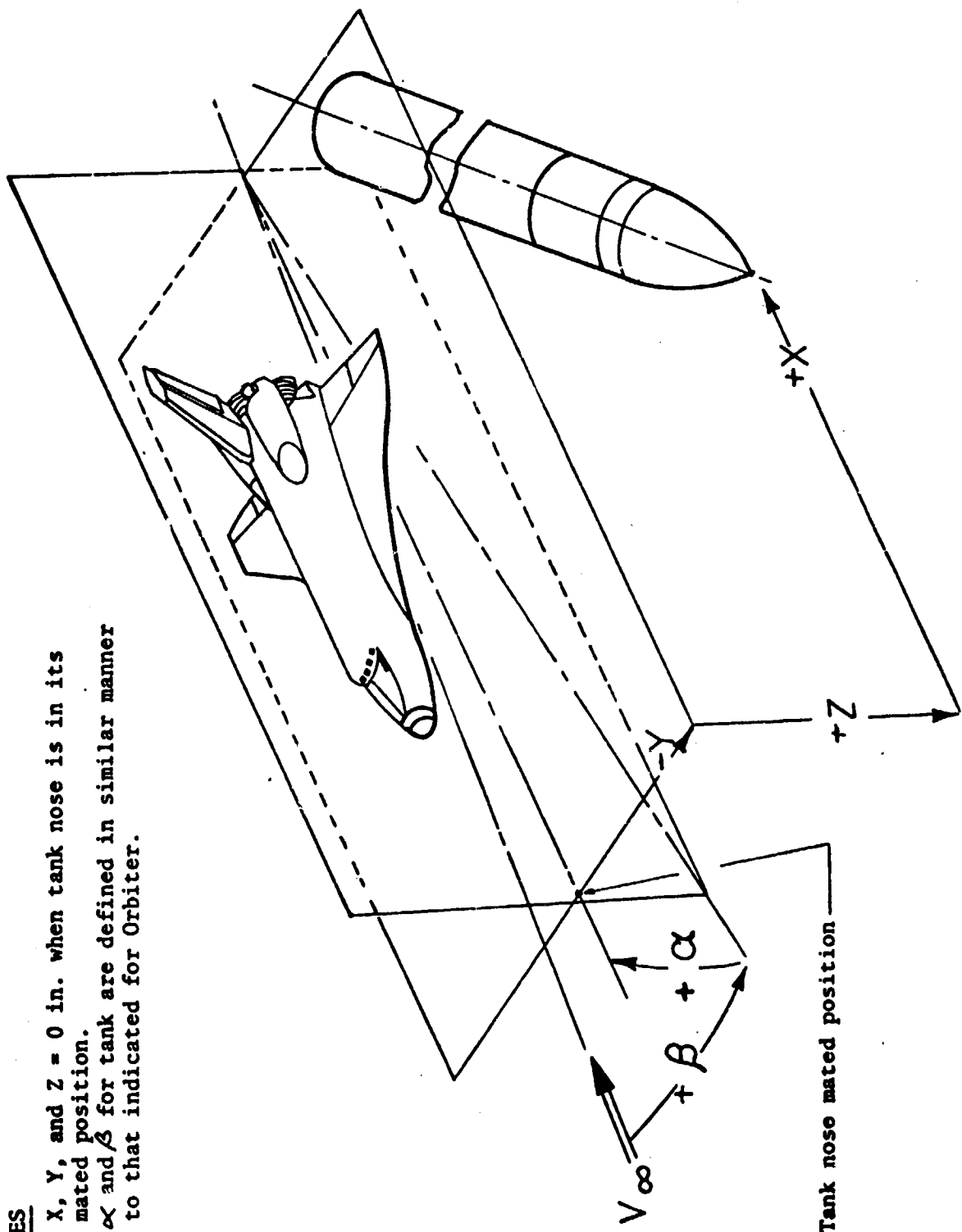
1. Models for Tank separation from Orbiter testing.
2. Mated position shown.
3. All dimensions in inches.

c. Model 32-OTS Orbiter and Tank Configuration 3

Figure 2. - Continued

NOTES

1. X, Y, and Z = 0 in. when tank nose is in its mated position.
2. α and β for tank are defined in similar manner to that indicated for Orbiter.

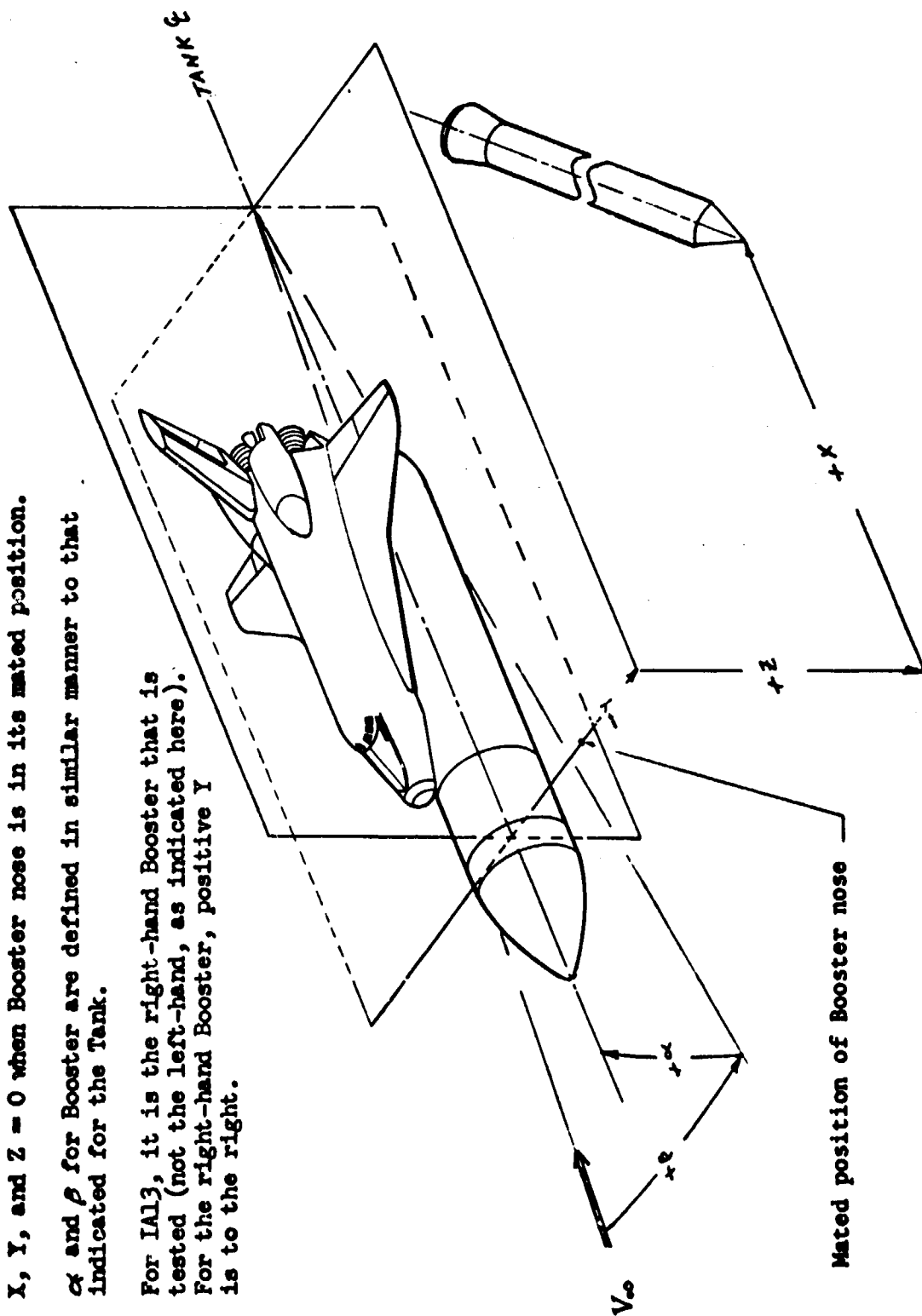


d. Tank Separation from Orbiter

Figure 2. - Continued

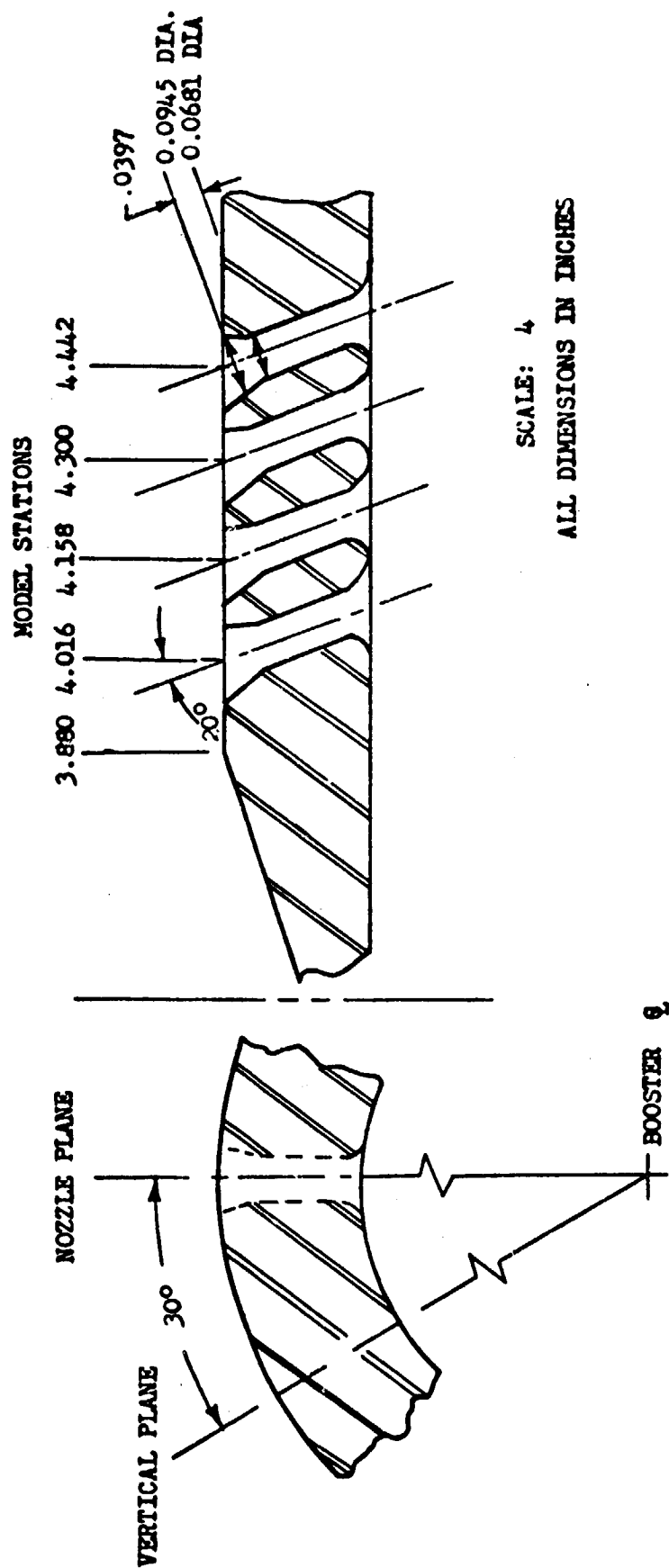
NOTES:

1. X , Y , and $Z = 0$ when Booster nose is in its mated position.
2. α and β for Booster are defined in similar manner to that indicated for the Tank.
3. For IAL3, it is the right-hand Booster that is tested (not the left-hand, as indicated here). For the right-hand Booster, positive Y is to the right.



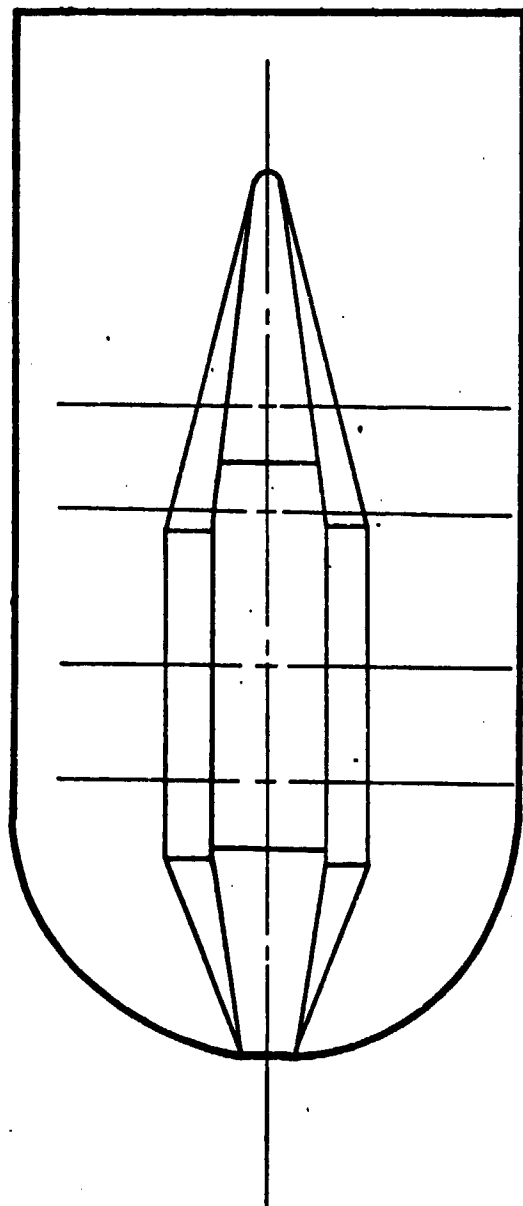
e. Booster Separation from Orbiter/Tank

Figure 2. - Continued

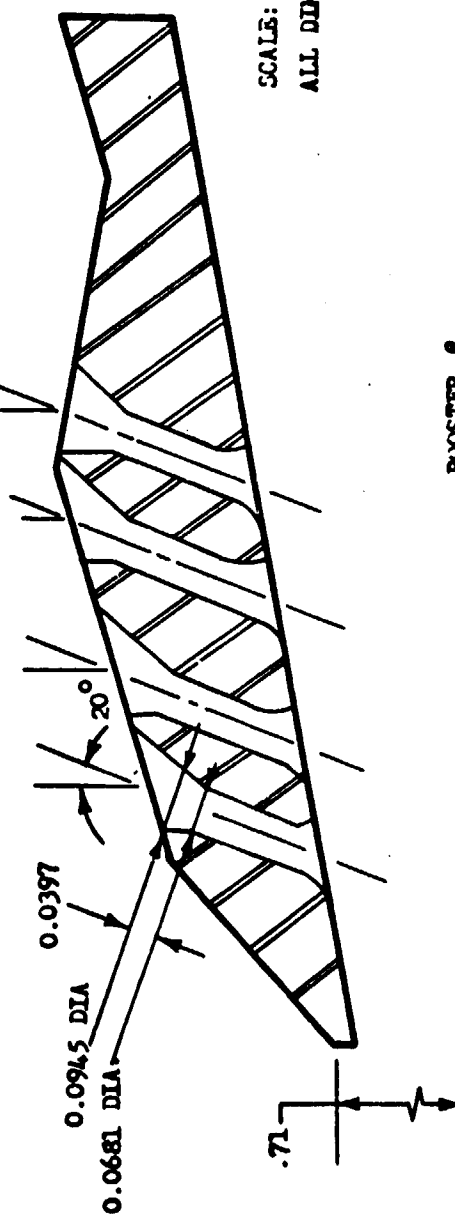


f. 32-OTS Booster Model Forward Thruster Nozzle Block

Figure 2. - Continued



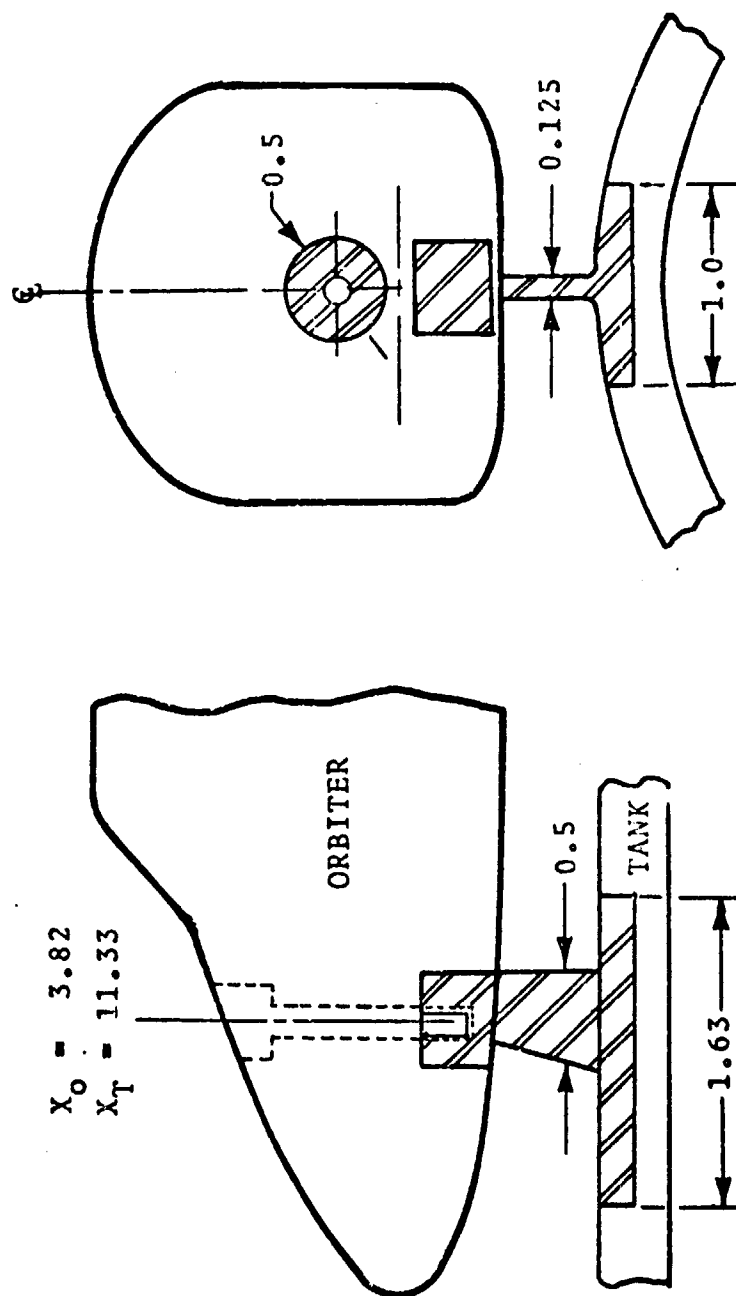
17.610 17.780 18.005 18.165 MODEL STATIONS



SCALE: 4
ALL DIMENSIONS IN INCHES

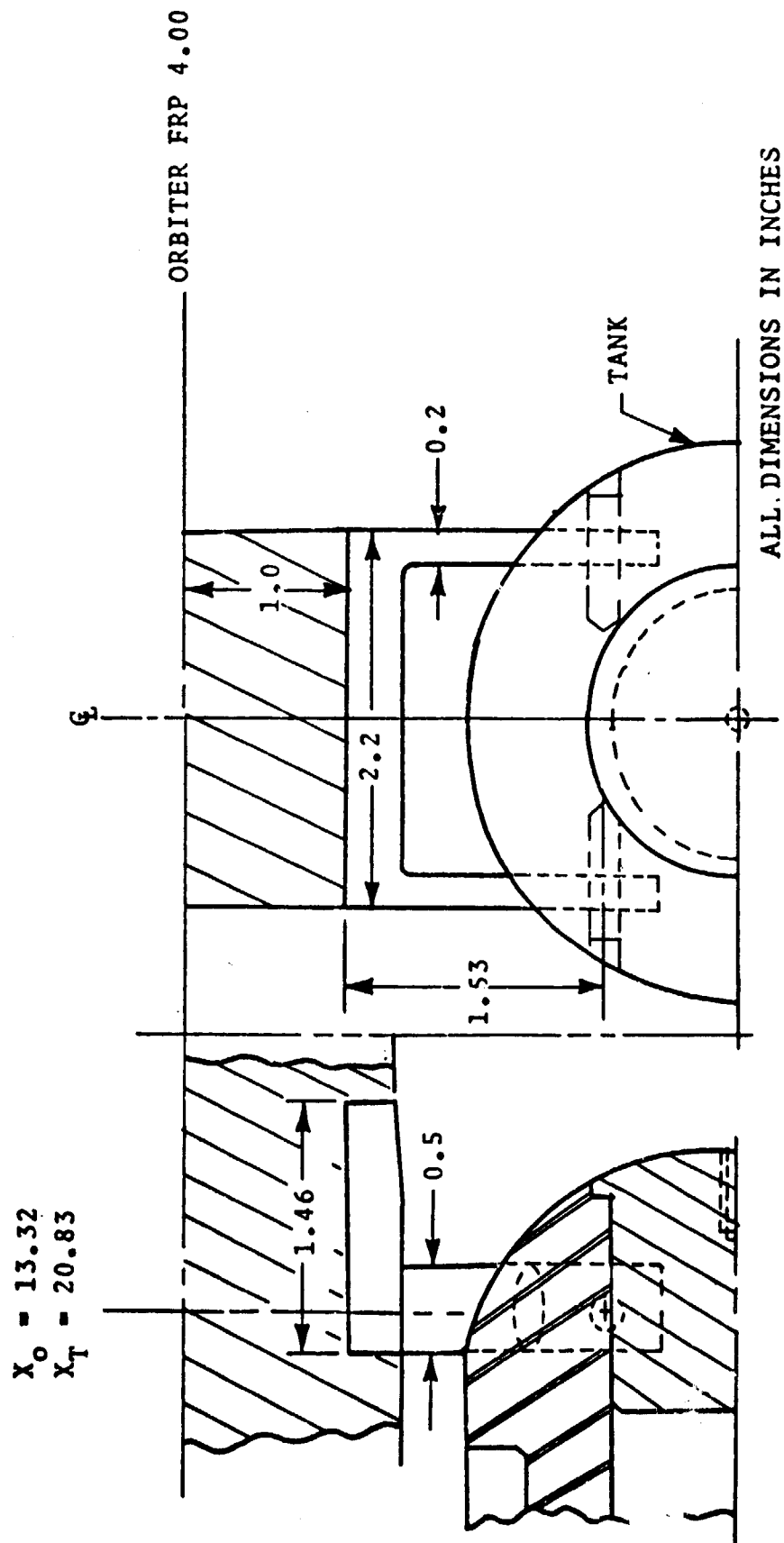
g. 32-OTS Booster Model Aft Thruster Nozzle Block

Figure 2. - Continued



h. 32-OTS Orbiter/Tank Forward Attachment

Figure 2. - Continued



i. 32-OTS Orbiter/Tank Aft Attachment

Figure 2. - Continued

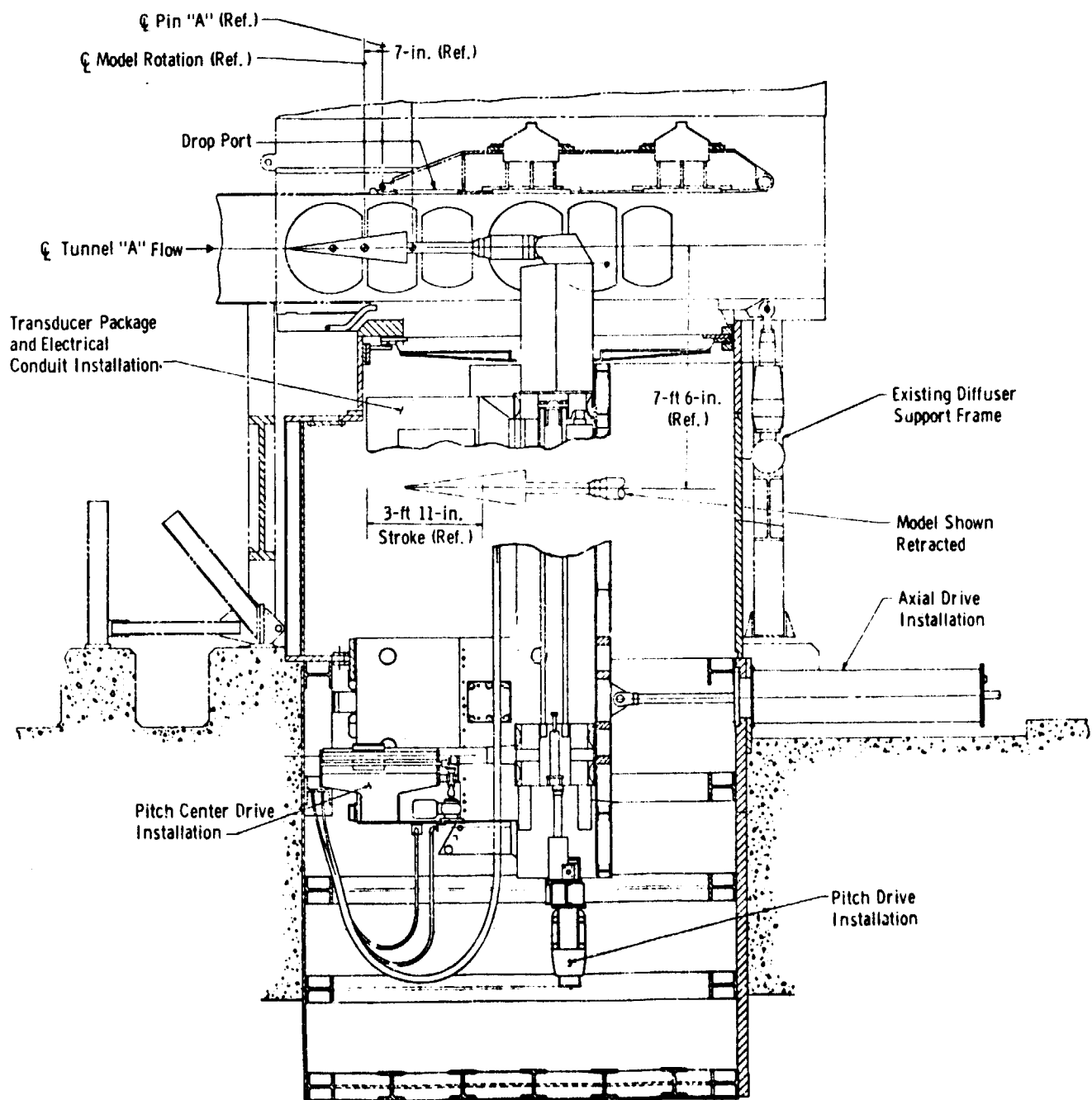


FIGURE 3. AEDC von Karman Gas Dynamic Facility Tunnel A

| <u>Volume</u> | <u>Description</u> |
|---------------|---------------------------------------|
| I | Data Figures (pages 1 through 894) |
| II | Data Figures (pages 895 through 1498) |
| III | Tabulated Source Data |

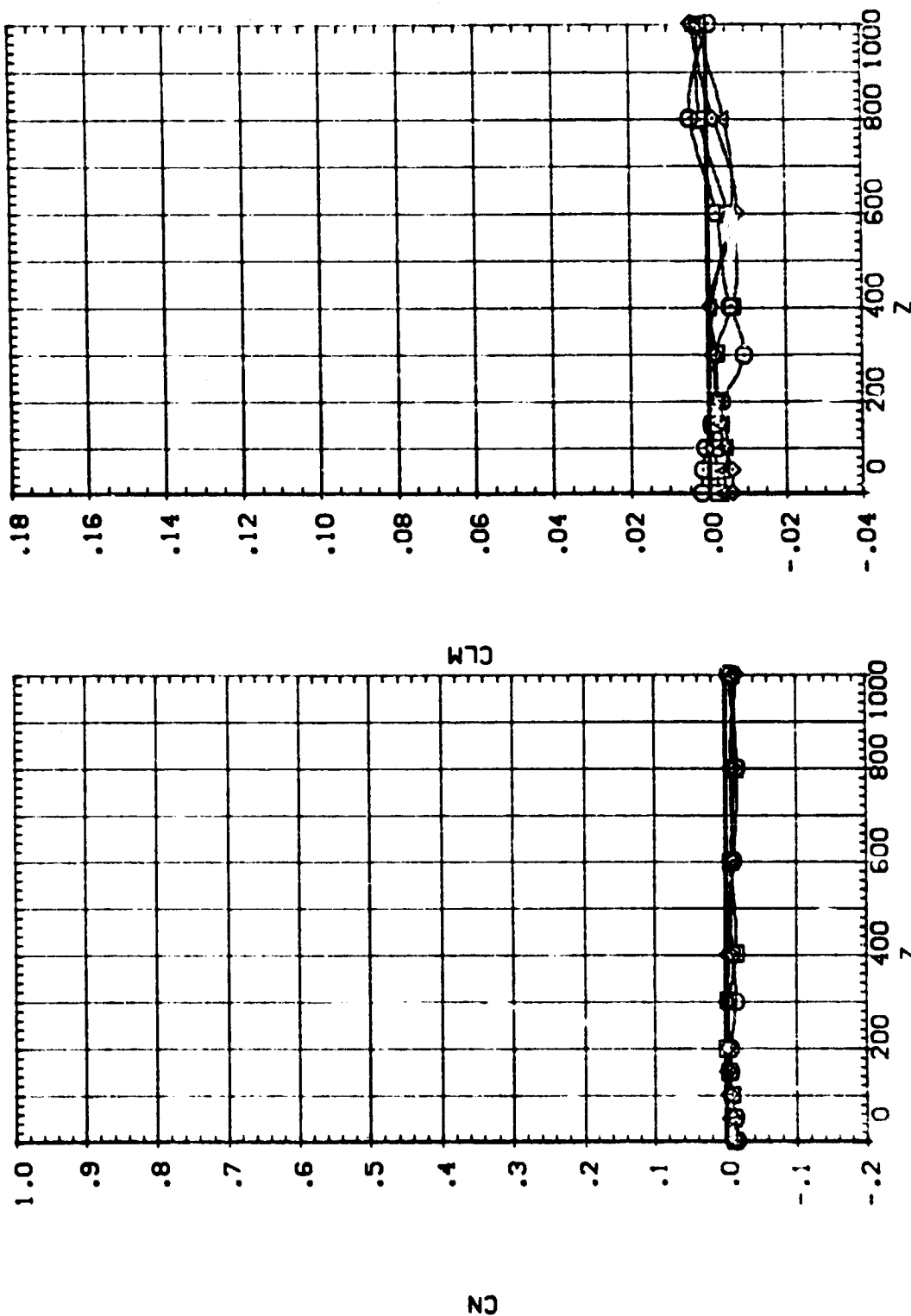
DATA FIGURES

VOLUME II

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ320)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|--------|
| | | MACH | PTOTAL | BETA | PC-PBR |
| ○ | .253 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.420 | .000 | .000 | .000 | .000 |
| ◇ | 600.520 | .000 | .000 | .000 | .000 |
| △ | 900.740 | .000 | .000 | .000 | .000 |



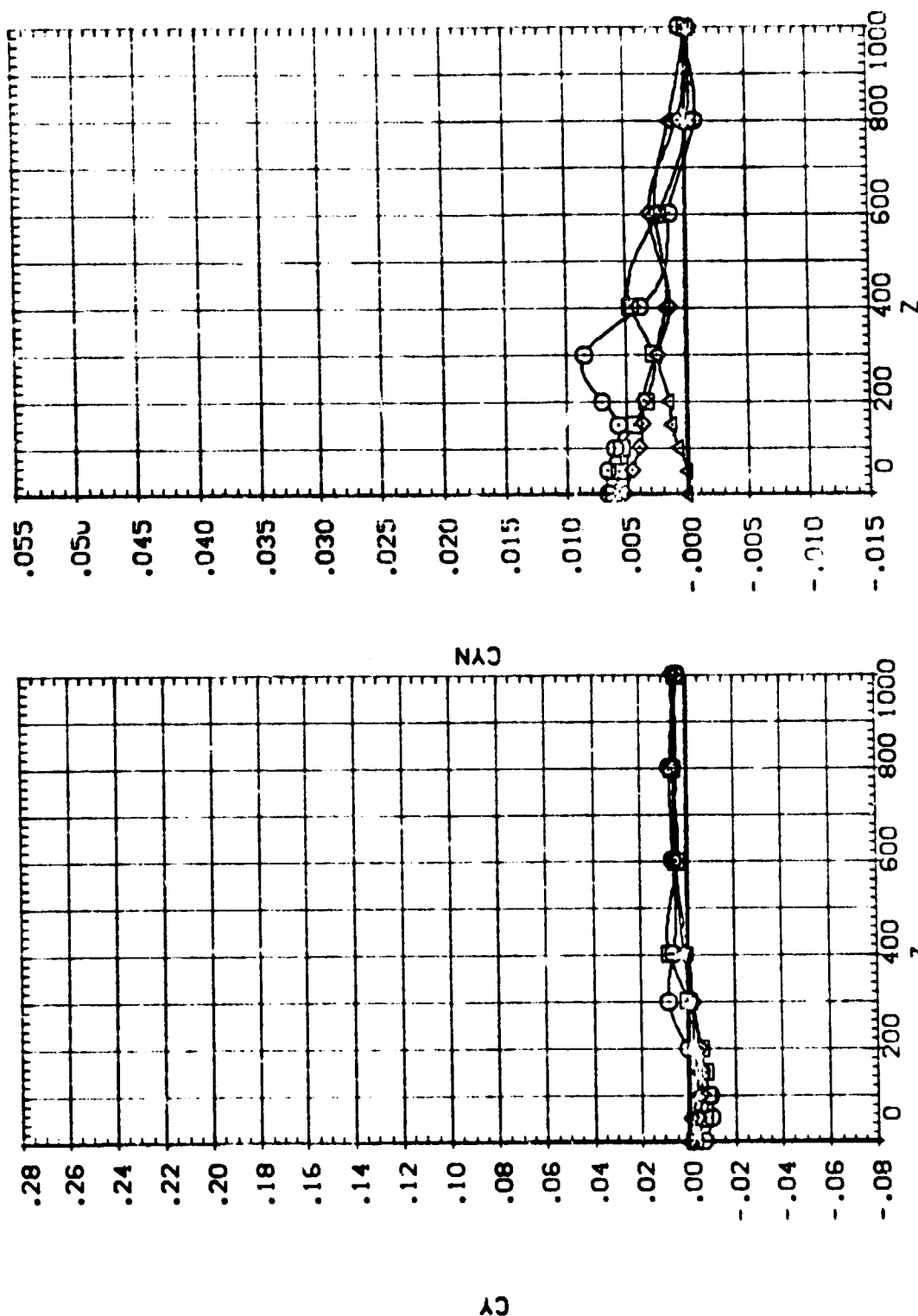
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

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1A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RT1320)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|---------|---------|
| | | MACH | 4.530 | PITOTAL | 110.000 |
| □ | 300.420 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.520 | DALPHA | .000 | DBETA | .000 |
| △ | 900.740 | Y | .000 | PCORR | .000 |

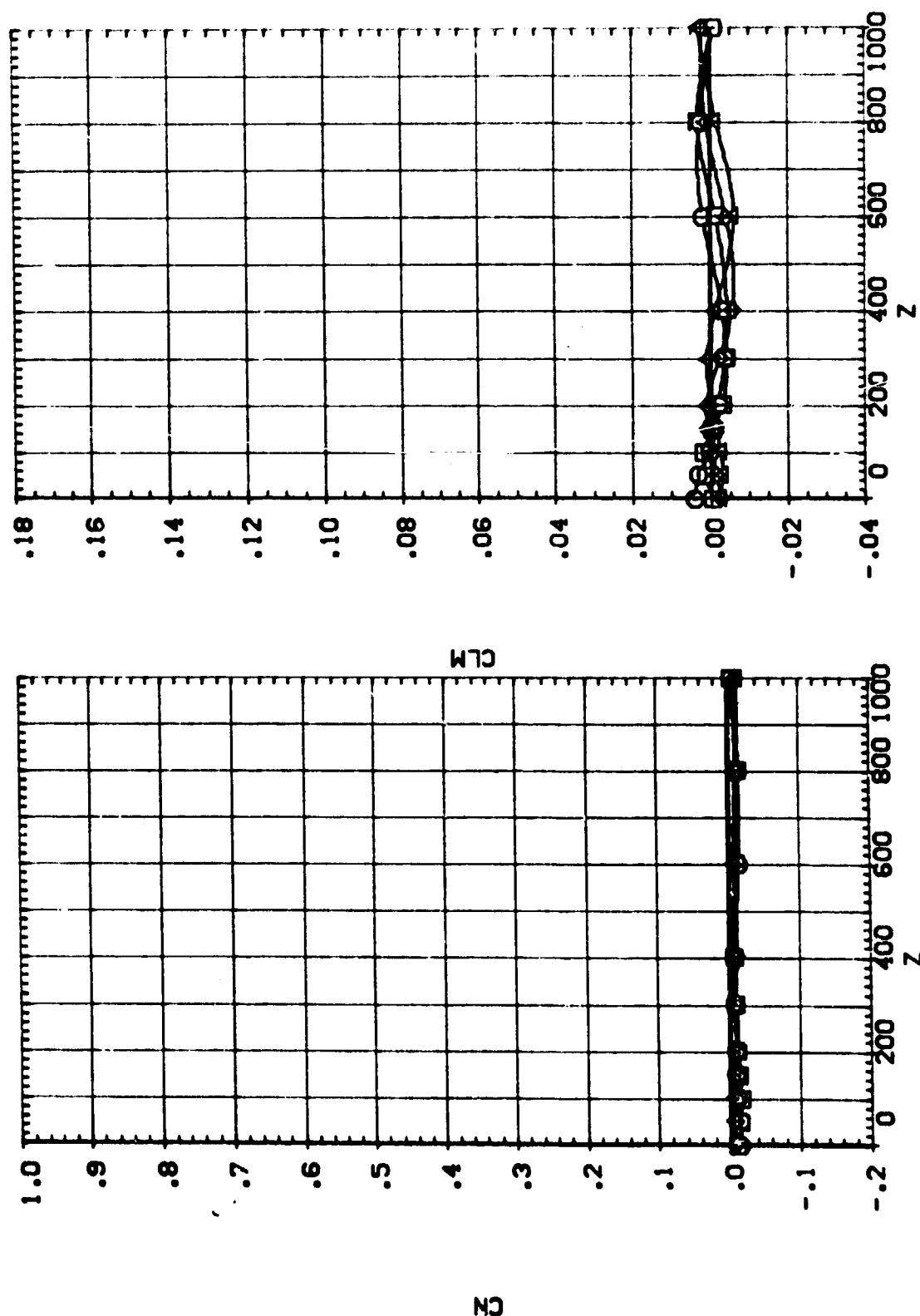


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ321)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

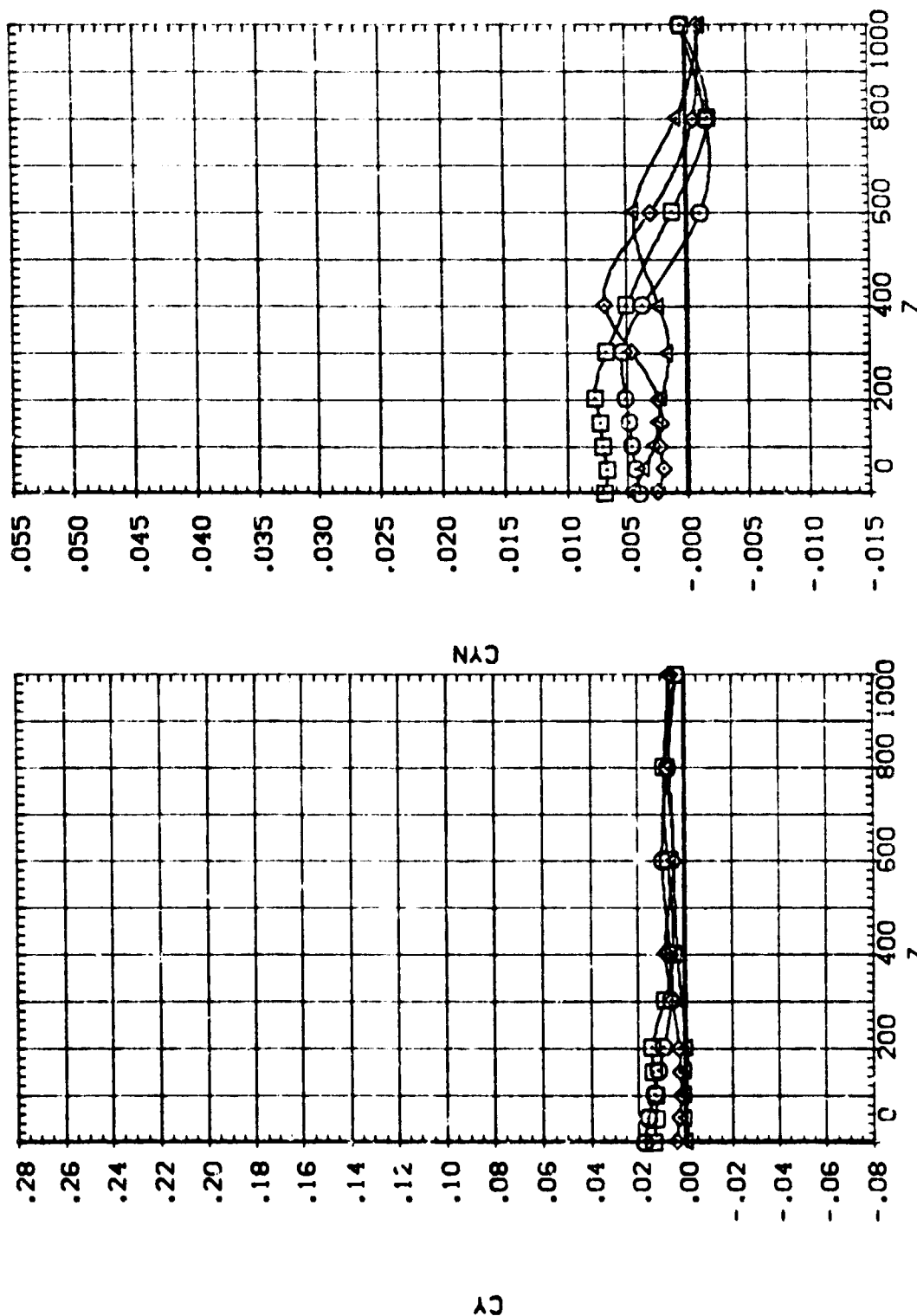
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|--------|---------|-------------------|---------|------|-------|
| | | MACH | PTOTAL | BETA | POWBR |
| ○ | .318 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.450 | .000 | .000 | .000 | .000 |
| ◇ | 600.480 | .000 | .000 | .000 | .000 |
| △ | 900.580 | 200.000 | .000 | .000 | .000 |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ321)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBO | X | PARAMETRIC VALUES | | | | |
|-------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | POTIAL | 110.000 | |
| □ | 300.450 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.480 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.590 | Y | 200.000 | PO-MER | .000 | |

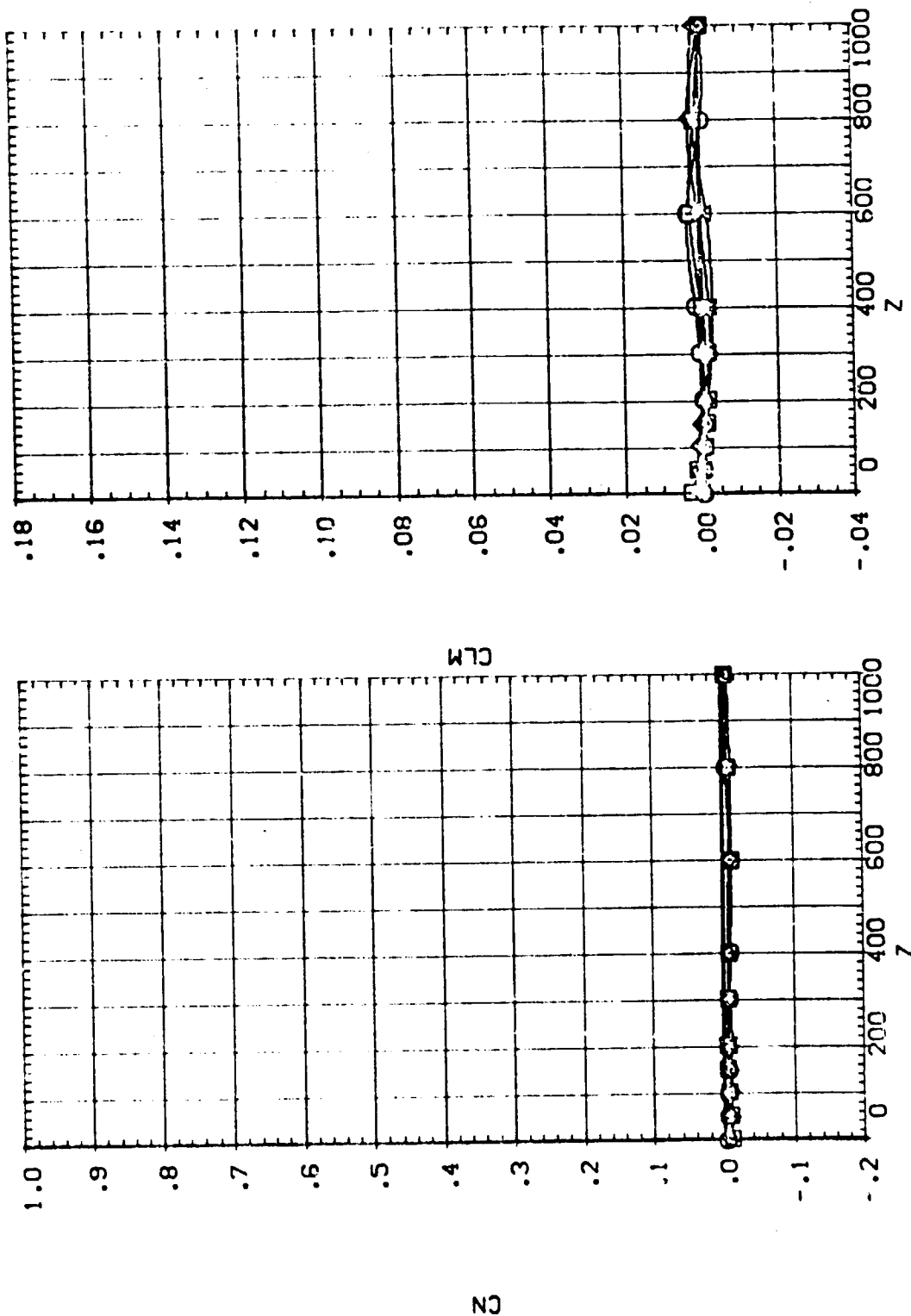


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM GRB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ322)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

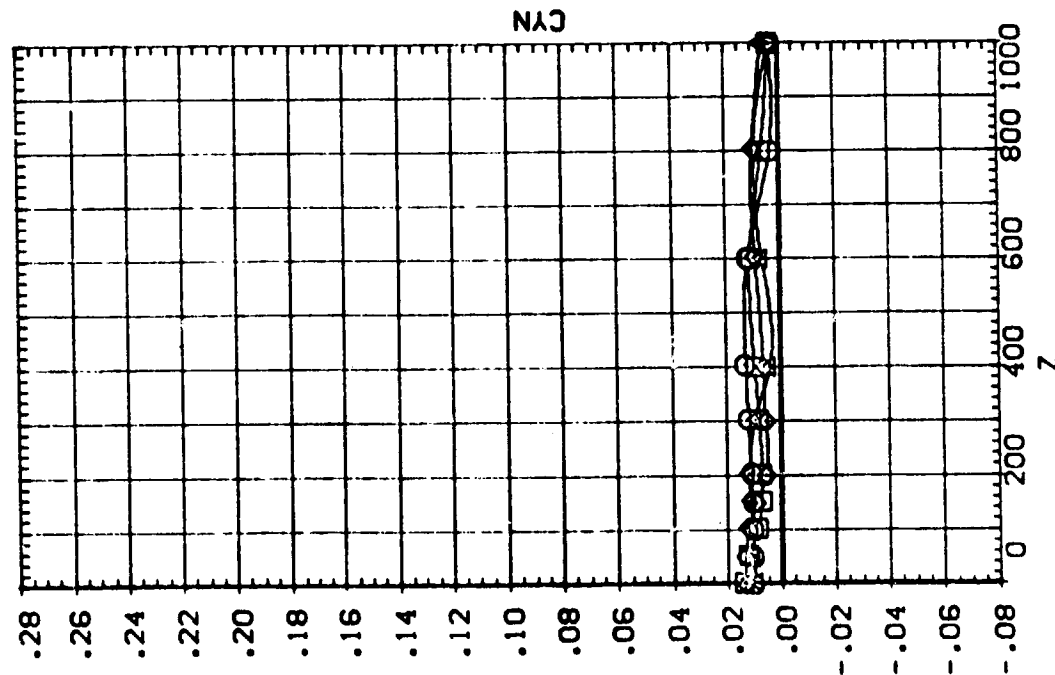
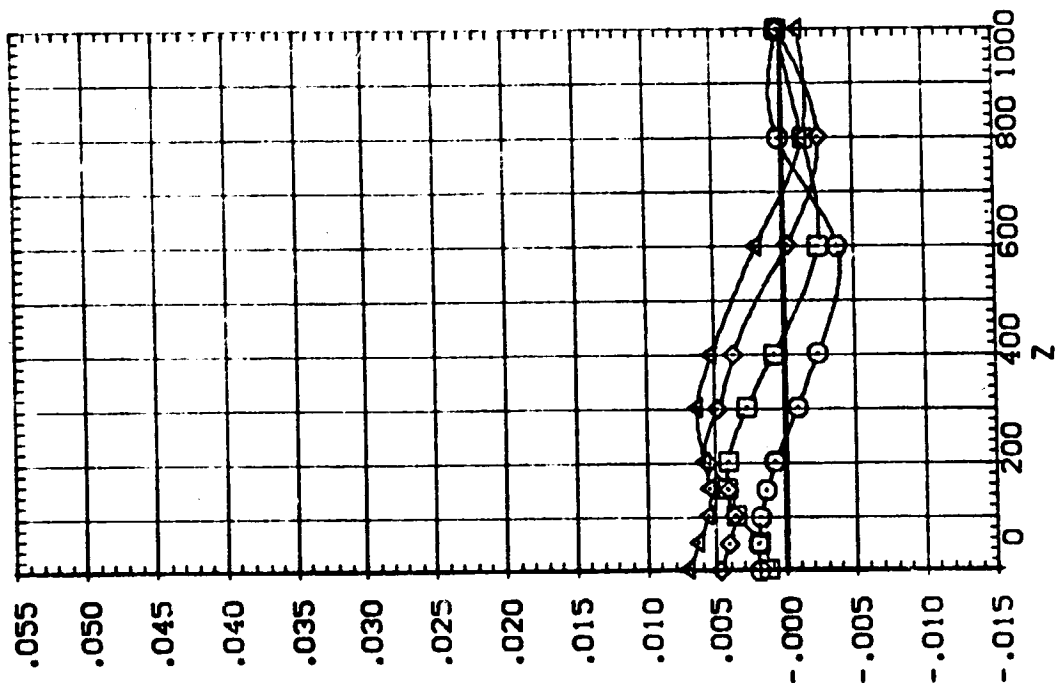
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|--------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.390 | ALPHA | .000 | BETA | .000 | |
| □ | 600.530 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.670 | Y | 400.000 | PCHSR | .0 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ322)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.390 | ALPHA | .000 | BETA | .000 | |
| □ | 600.530 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.670 | Y | 400.000 | PC-HSR | .000 | |



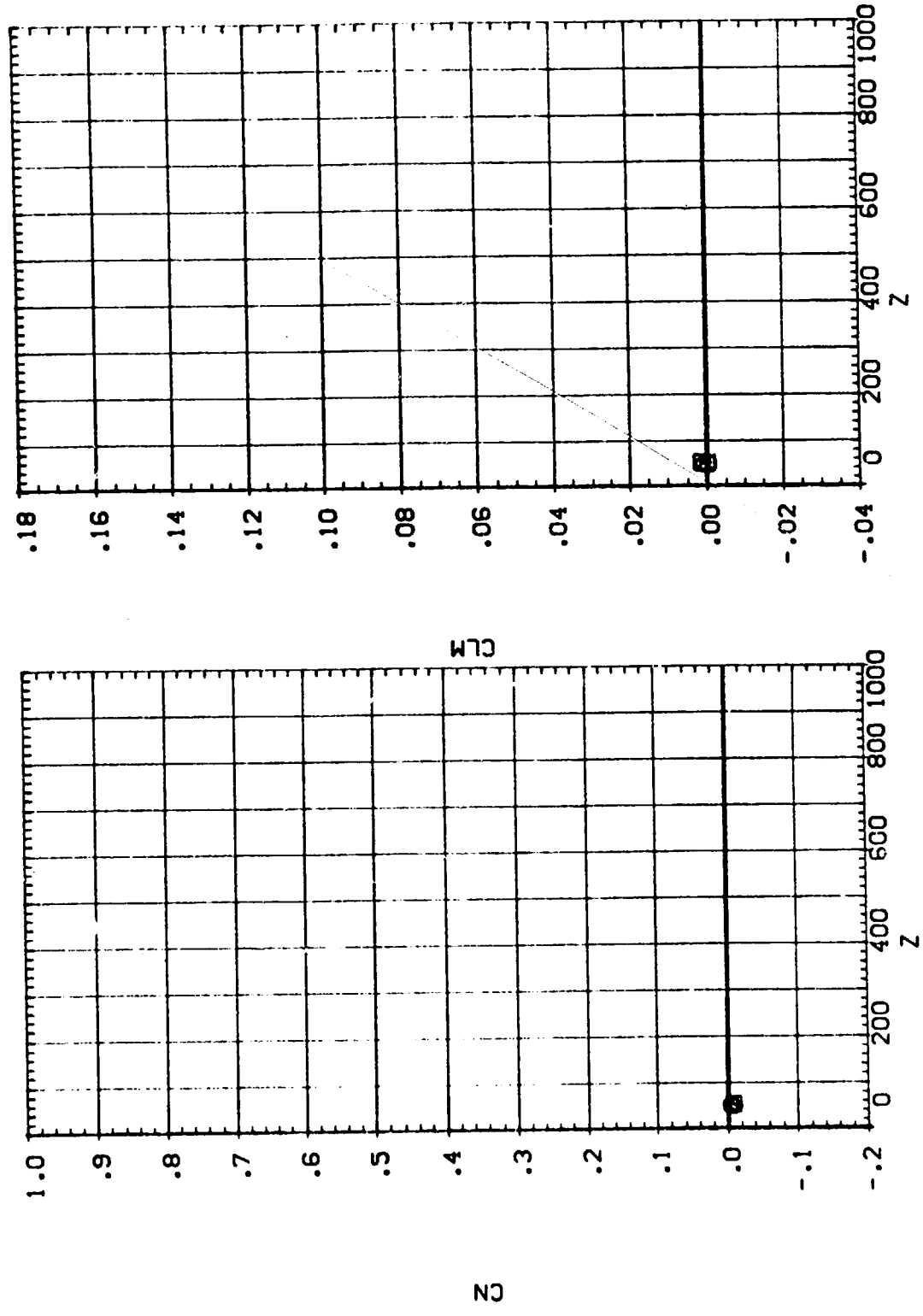
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ323)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

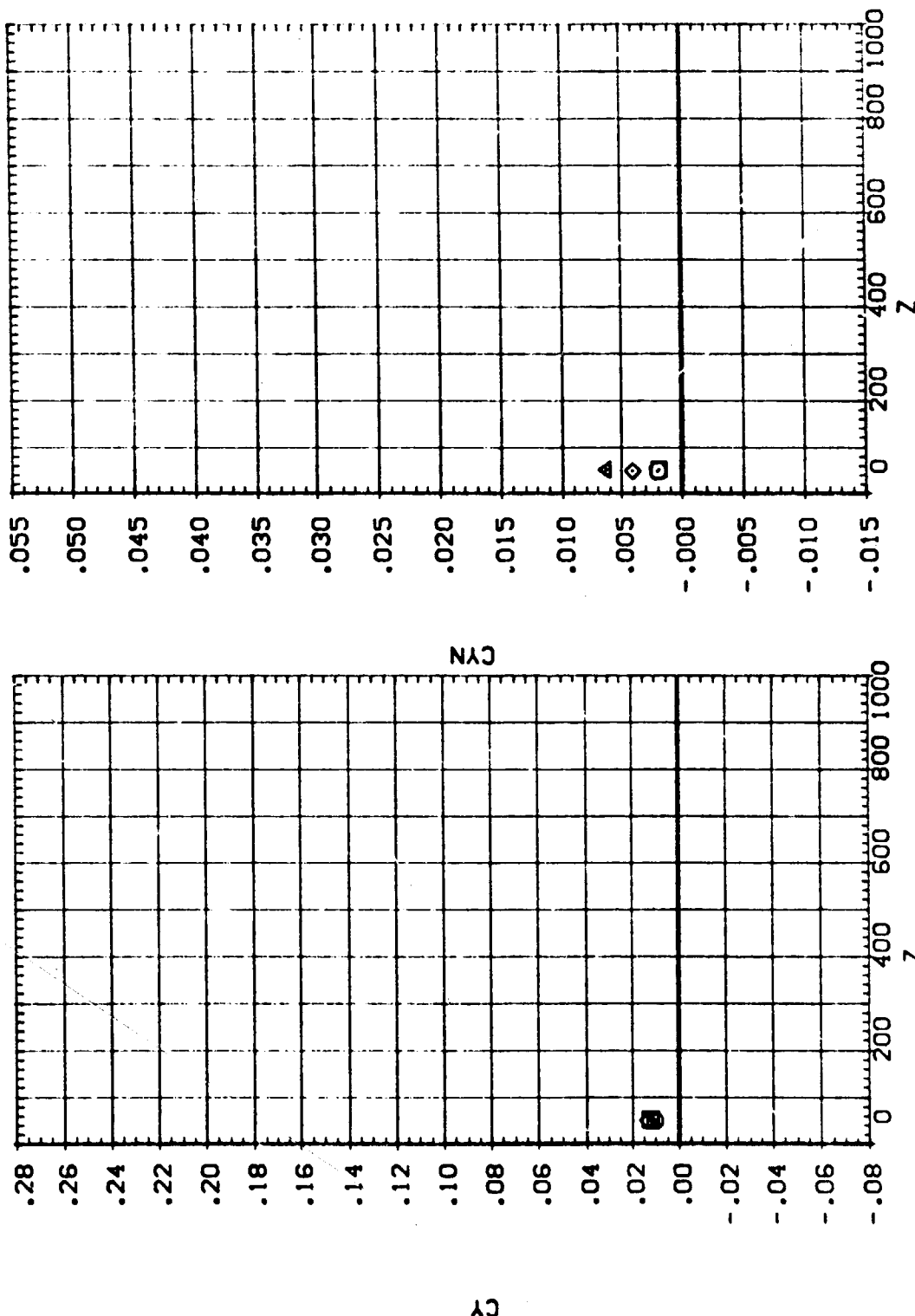
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|--------|
| | | MACH | PI TOTAL | BETA | PC-MER |
| ○ | .238 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.380 | .000 | .000 | .000 | .000 |
| ◇ | 600.510 | .000 | .000 | .000 | .000 |
| △ | 900.680 | 800.000 | .000 | .000 | .000 |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ323)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|-------|-------|
| | | MACH | PTOTAL | BETA | DBETA | PC+BR |
| ○ | .238 | 4.530 | 110.000 | .000 | .000 | .000 |
| □ | 300.380 | .000 | .000 | .000 | .000 | .000 |
| ◇ | 600.510 | .000 | .000 | .000 | .000 | .000 |
| △ | 900.680 | 800.000 | PC+BR | .000 | .000 | .000 |



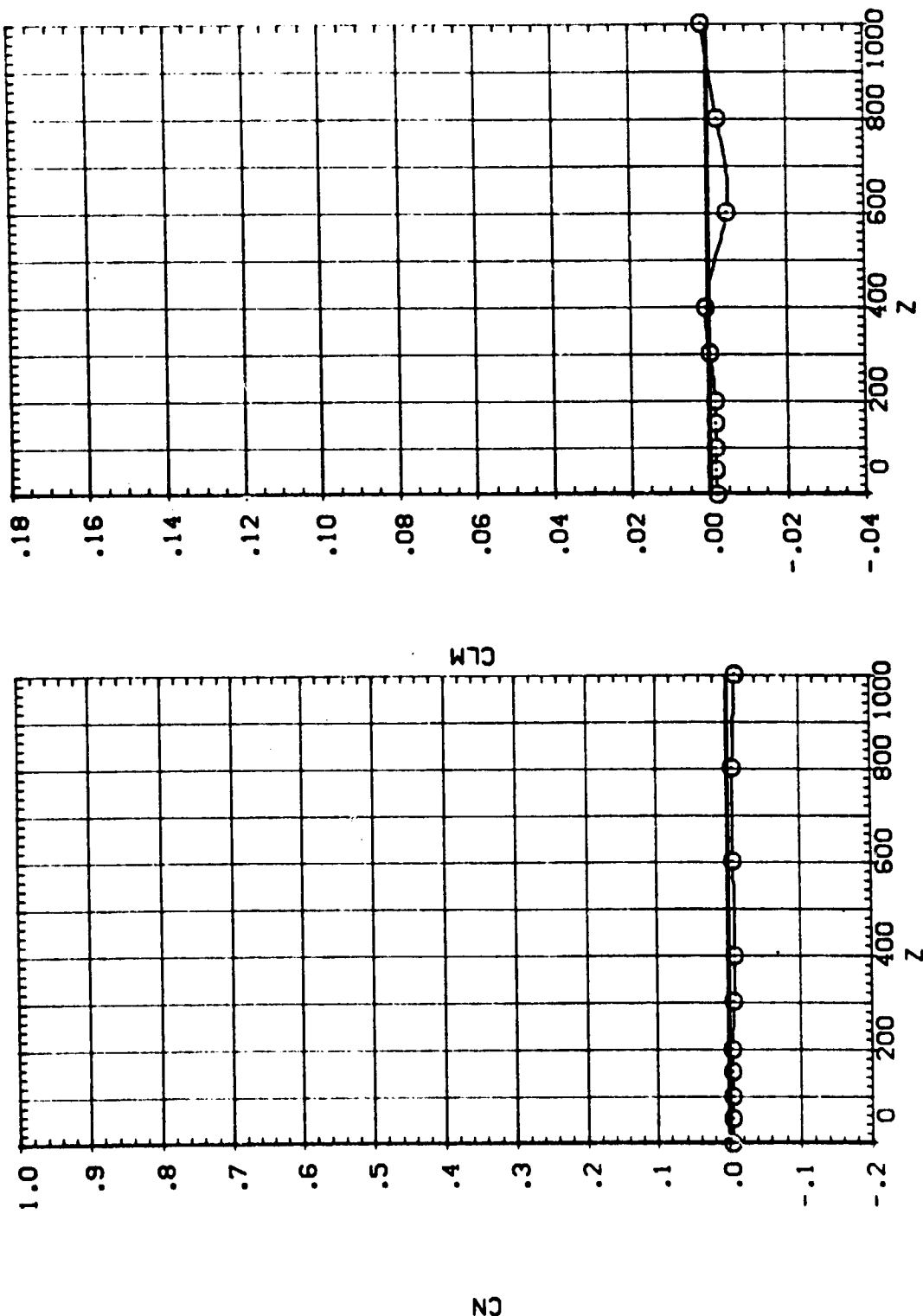
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ325)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X
O 1600.900

| PARAMETRIC VALUES | |
|-------------------|---------|
| MACH | 4.530 |
| PTOTAL | 110.000 |
| ALPHA | .000 |
| BETA | .000 |
| DBETA | .000 |
| PO-FBR | .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ325)

SYMBOL

X

1600.900

MACH

4.530

PARAMETRIC VALUES

PTOTAL

110.000

BETA

.000

DBETA

.000

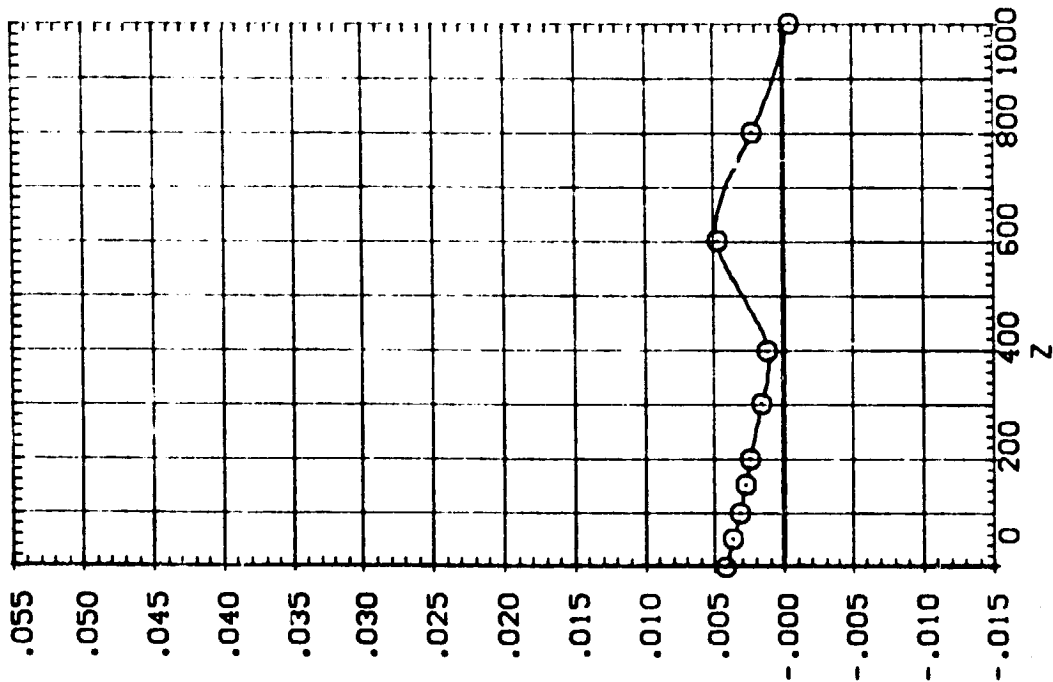
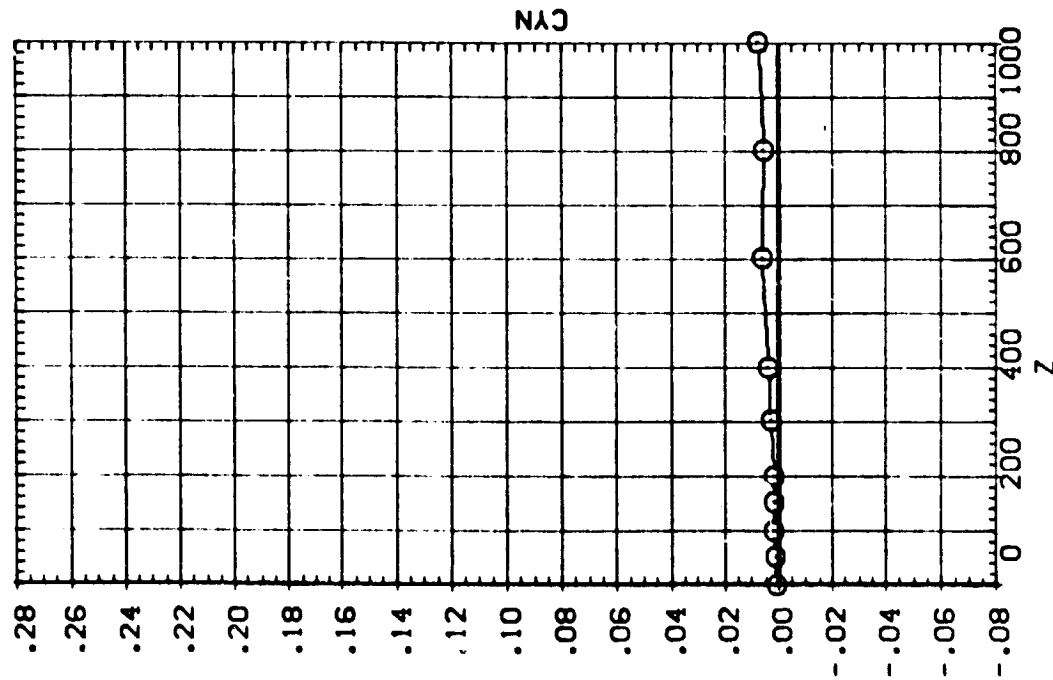
Y

400.000

PC+PR

.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

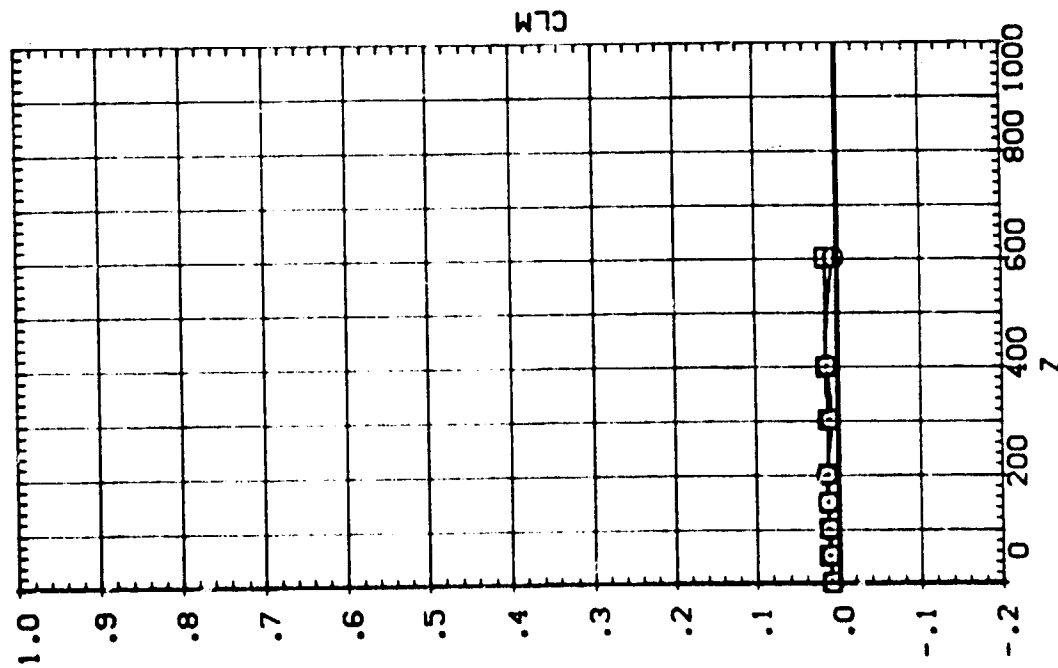
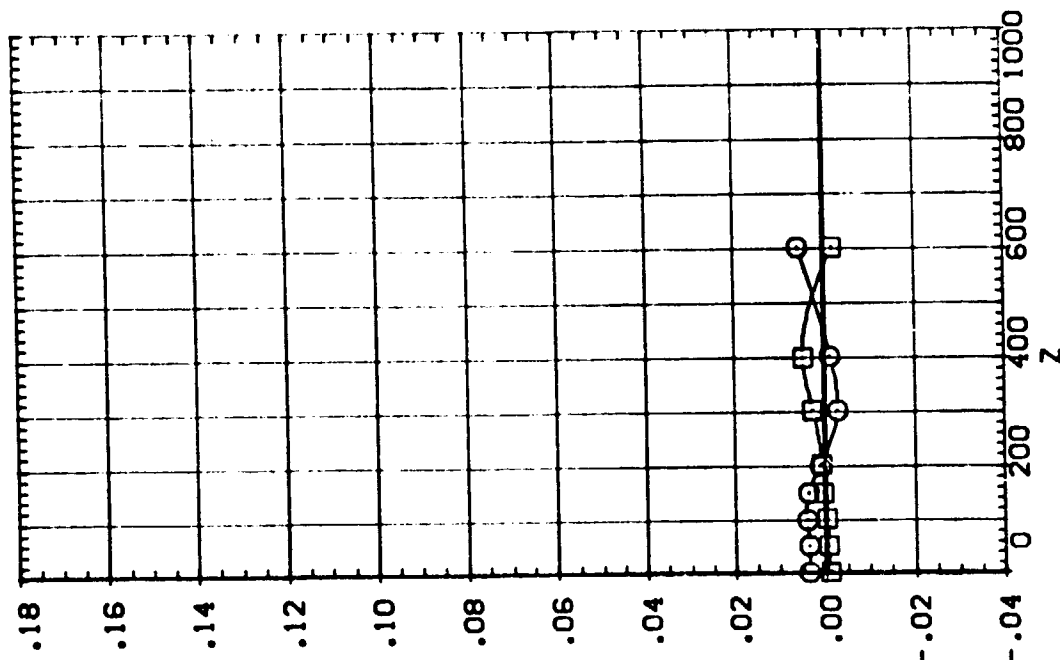


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ326)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|--------|---------|--|
| ○ | .295 | MACH | 4.530 | PTOTAL | 110.000 | |
| □ | 500.670 | ALPHA | .000 | BETA | .000 | |
| | | DALPHA | 5.000 | DBETA | .000 | |
| | | Y | .000 | PCFBR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RYJ326)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBO- X

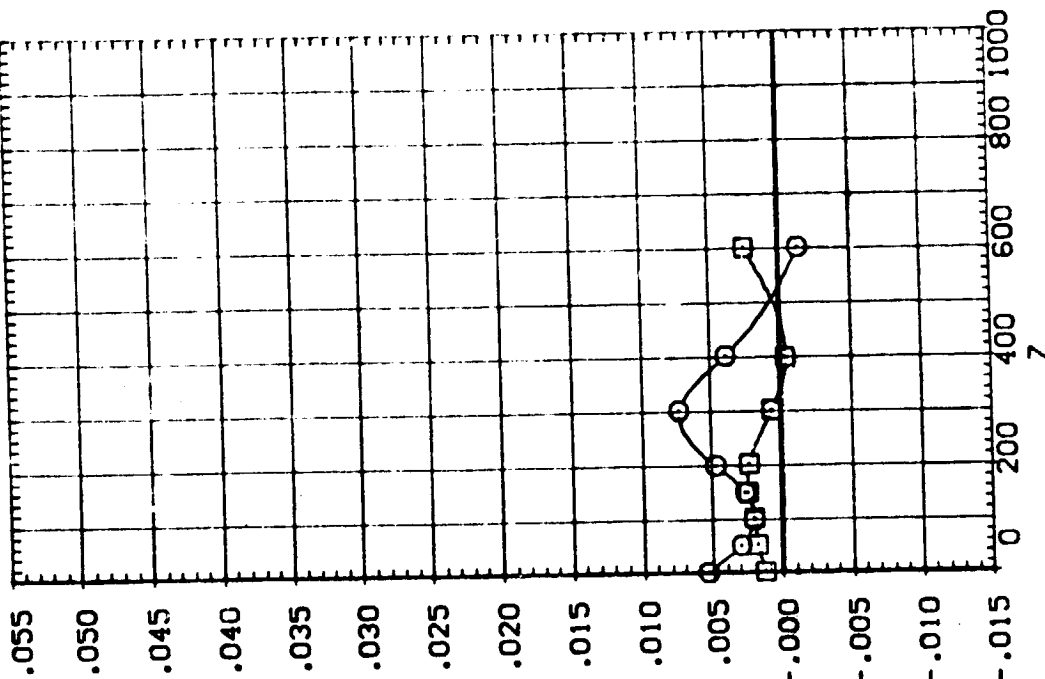
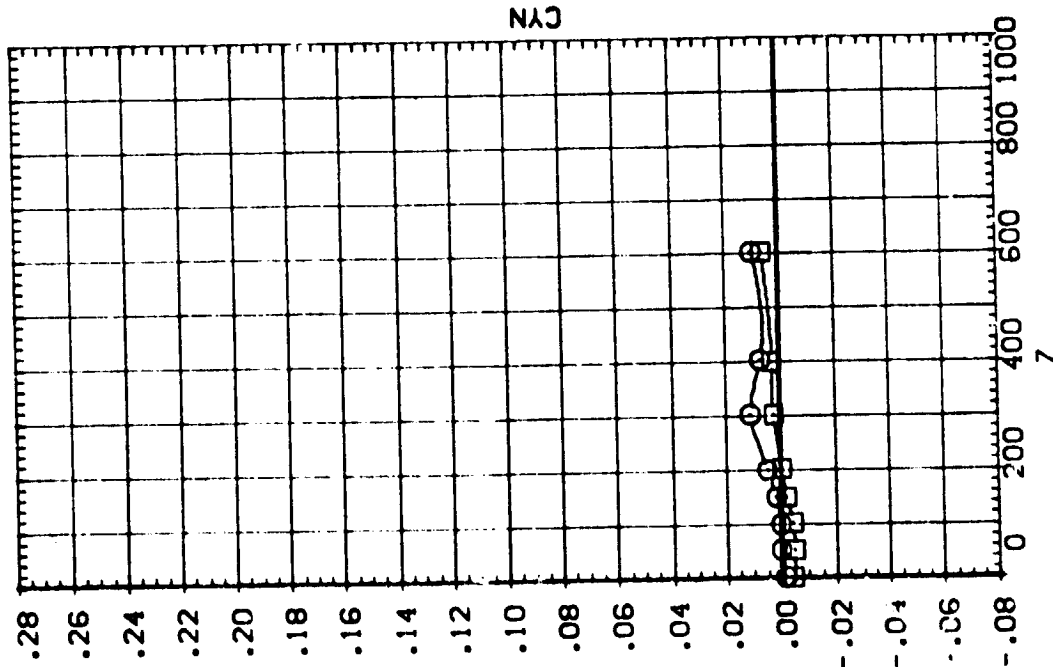
○ □

.295
900.670

MACH
ALPHA
DALPHA
Y

PARAMETRIC VALUES

4.530 PTOTAL 110.000
.000 BETA .000
5.000 DBETA .000
.000 PC-MBR .000

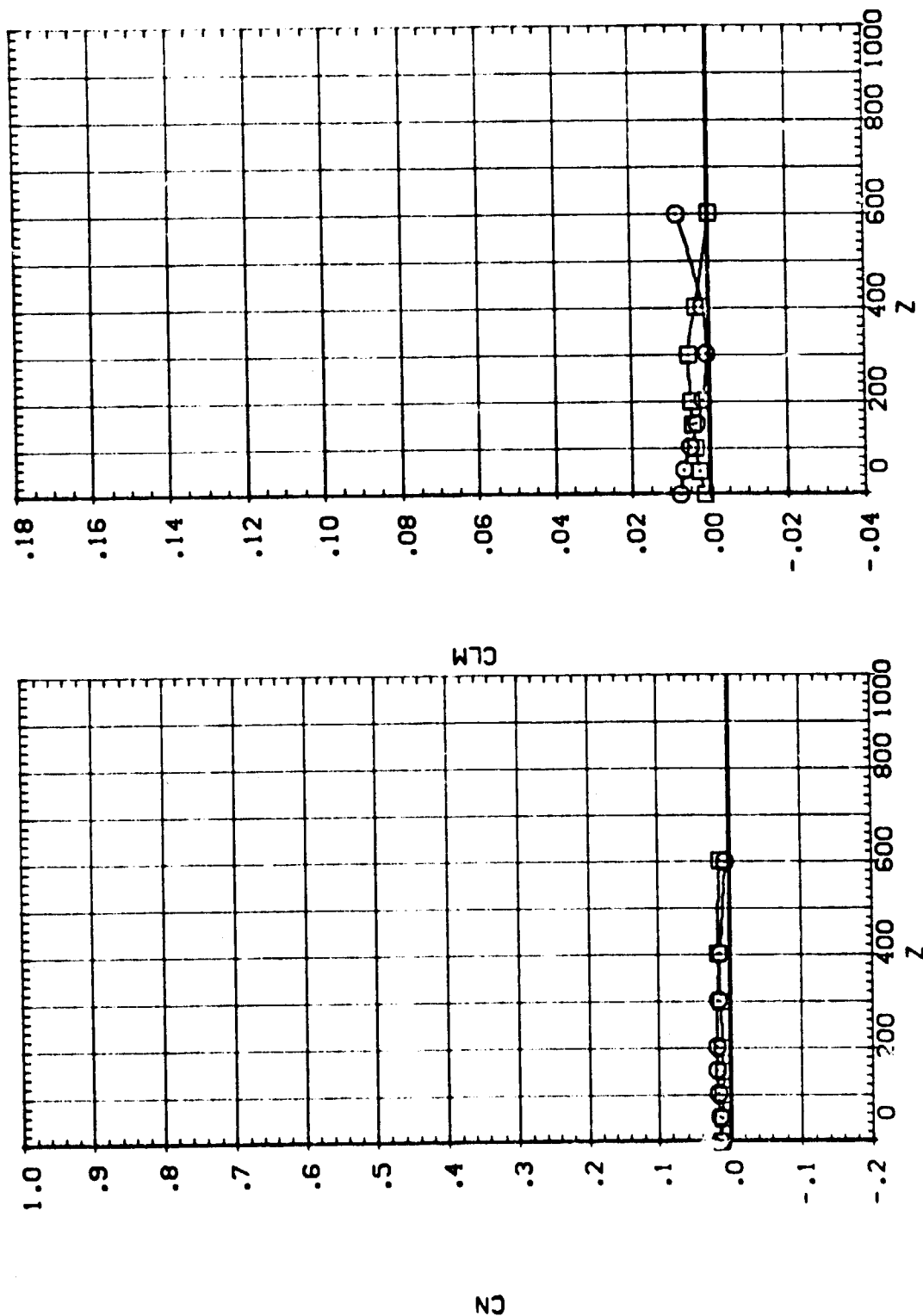


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ327)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|---------|--------|
| | | MACH | ALPHA | BETA | PC-HBR |
| ○ | .440 | 4.530 | PTOTAL | 110.000 | |
| □ | 900.670 | .000 | BETA | .000 | |
| | | 5.000 | DBETA | .000 | |
| | | 200.000 | PC-HBR | .000 | |

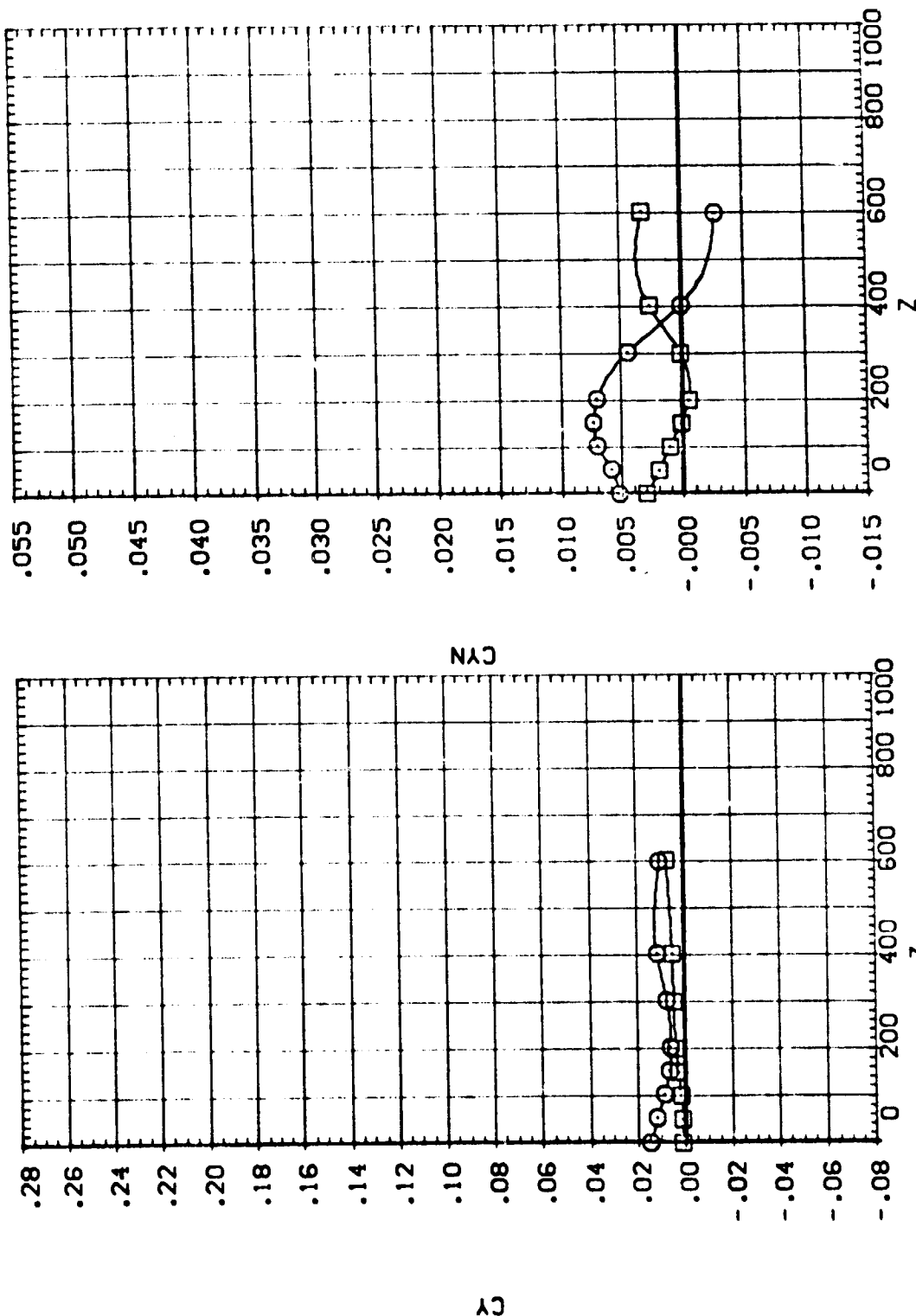


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09110 (RTJ327)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|---------|
| | | MACH | 4.530 | P/TOTAL | 110.000 |
| ○ | 500.670 | ALPHA | .000 | BETA | .000 |
| □ | | DALPHA | 5.000 | DBETA | .000 |
| | | Y | 200.000 | PC-MBR | .000 |



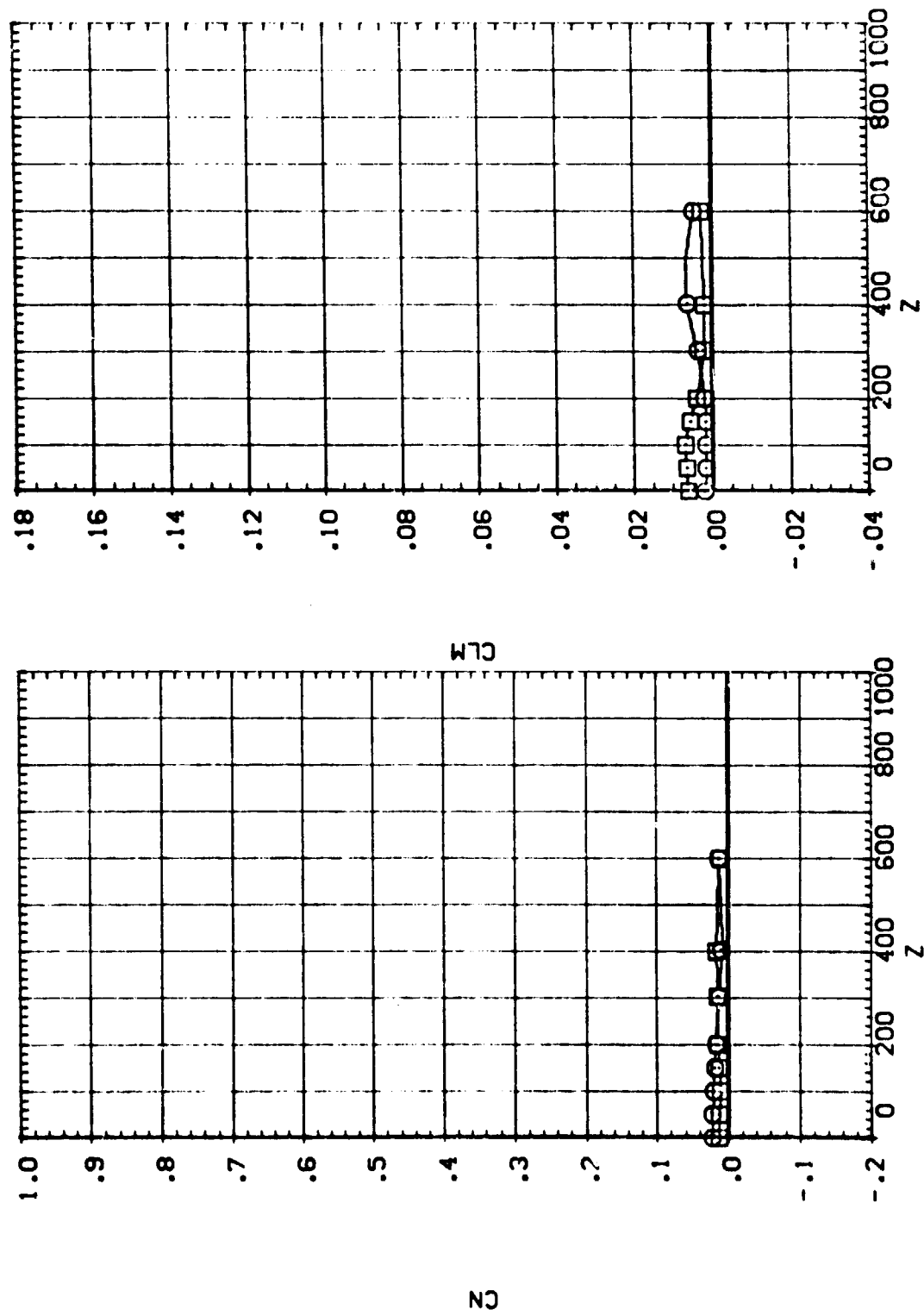
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ328)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|-------|--------|
| | | MACH | PTOTAL | BETA | DBETA | PC-HSR |
| ○ | .303 | 4.530 | 110.000 | .000 | .000 | .000 |
| □ | 900.580 | .000 | .000 | .000 | .000 | .000 |



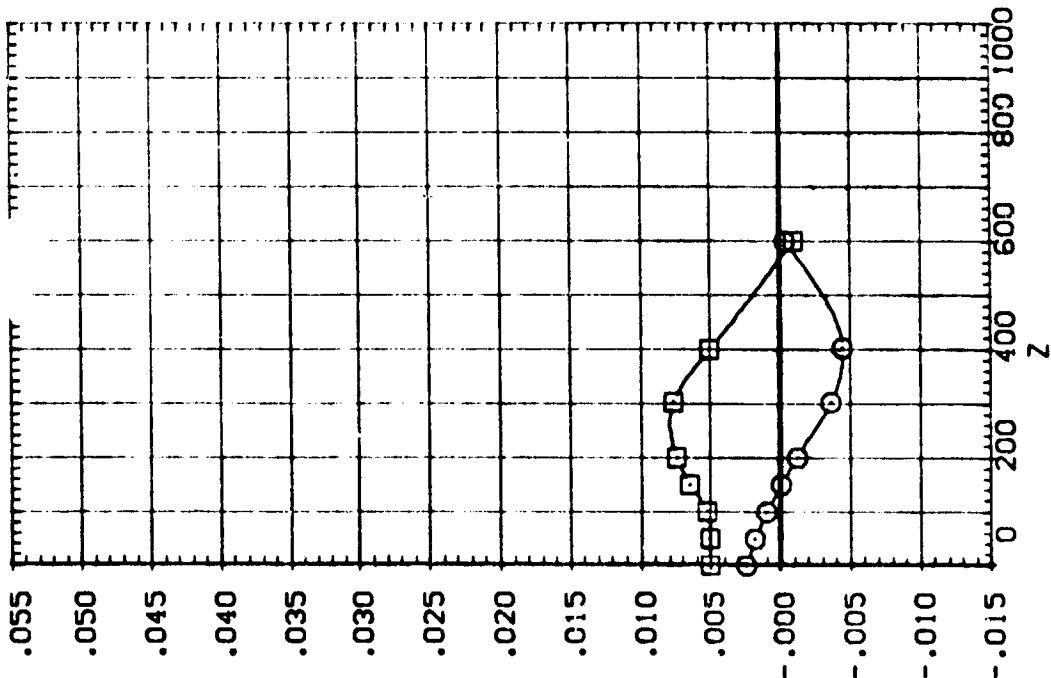
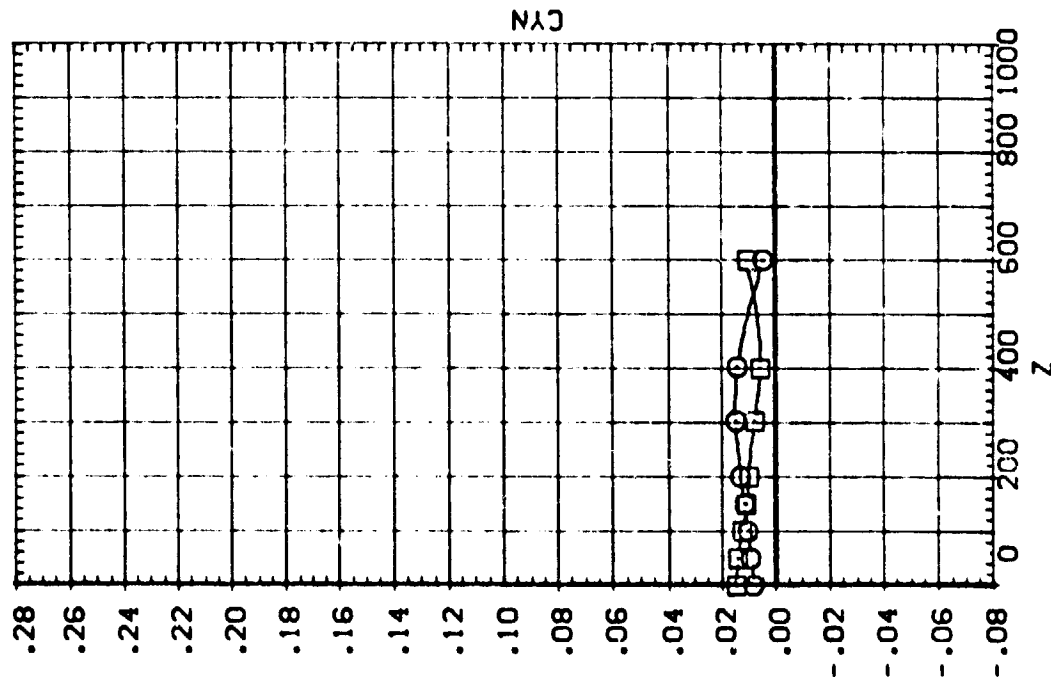
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09110 (RIJ328)

SYMBOL X
 O
 □

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA .000
 Y 400.000 PC-HBR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

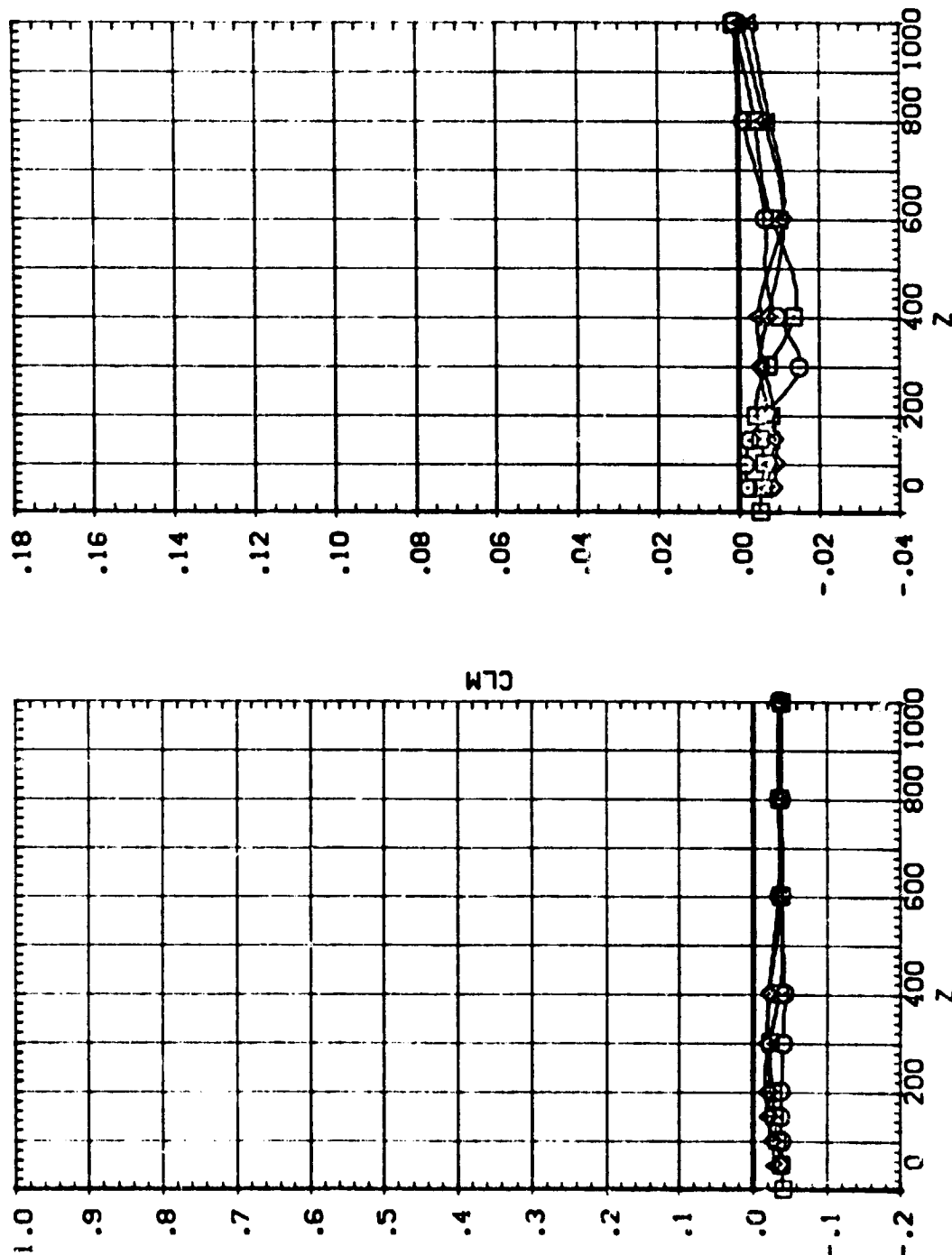


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ329)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | .343 | 4.530 | PTOTAL 110.000 |
| □ | 300.360 | .000 | BETA .000 |
| ◇ | 600.660 | -5.000 | DBETA .000 |
| △ | 900.460 | .000 | PC-HBR .000 |



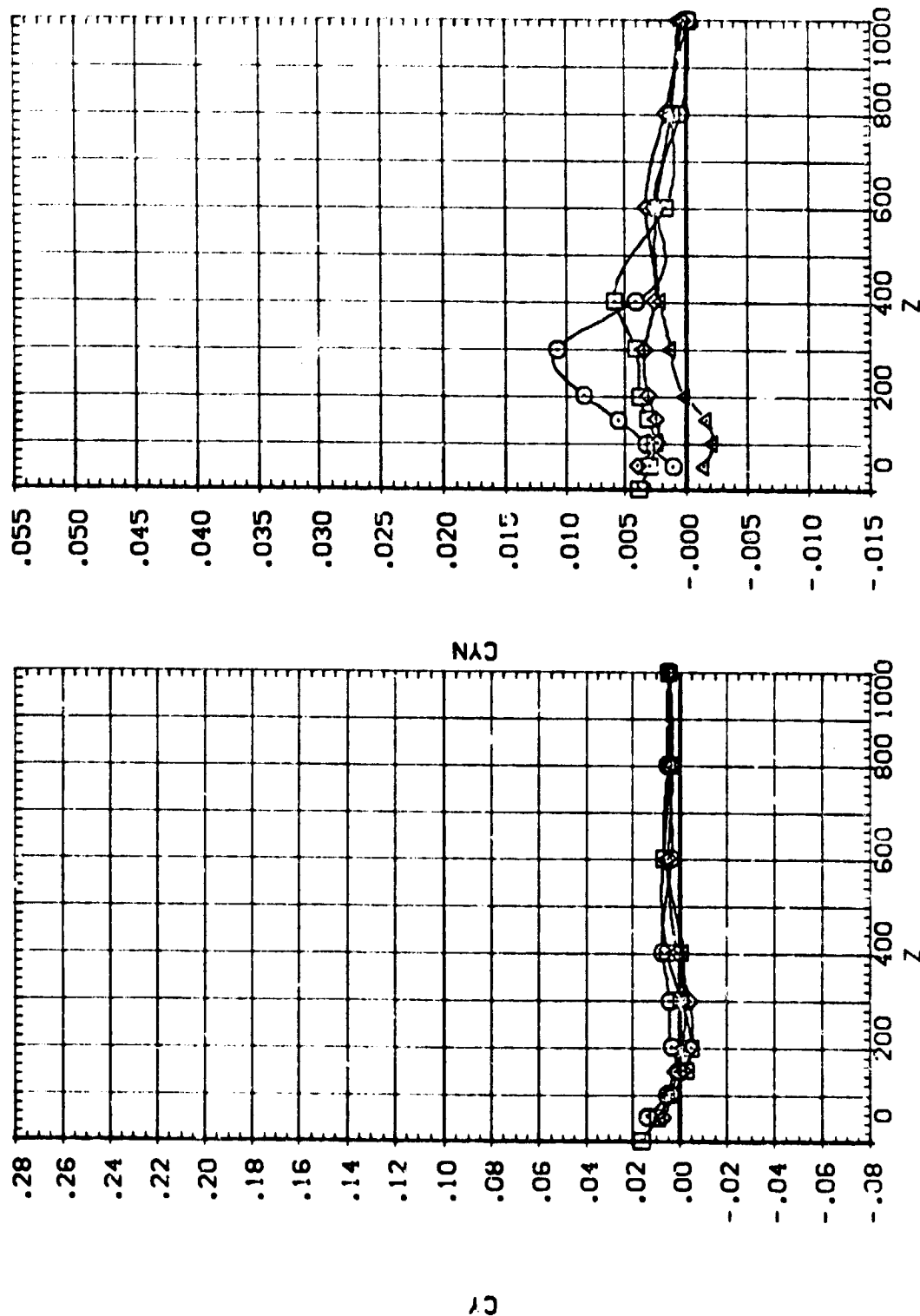
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ329)

SYMBOL

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | .343 | 4.530 | PITOTAL 110.000 |
| □ | 300.360 | .000 | BETA .000 |
| ◇ | 600.660 | -5.000 | DBETA .000 |
| △ | 900.460 | .000 | PC-HR .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

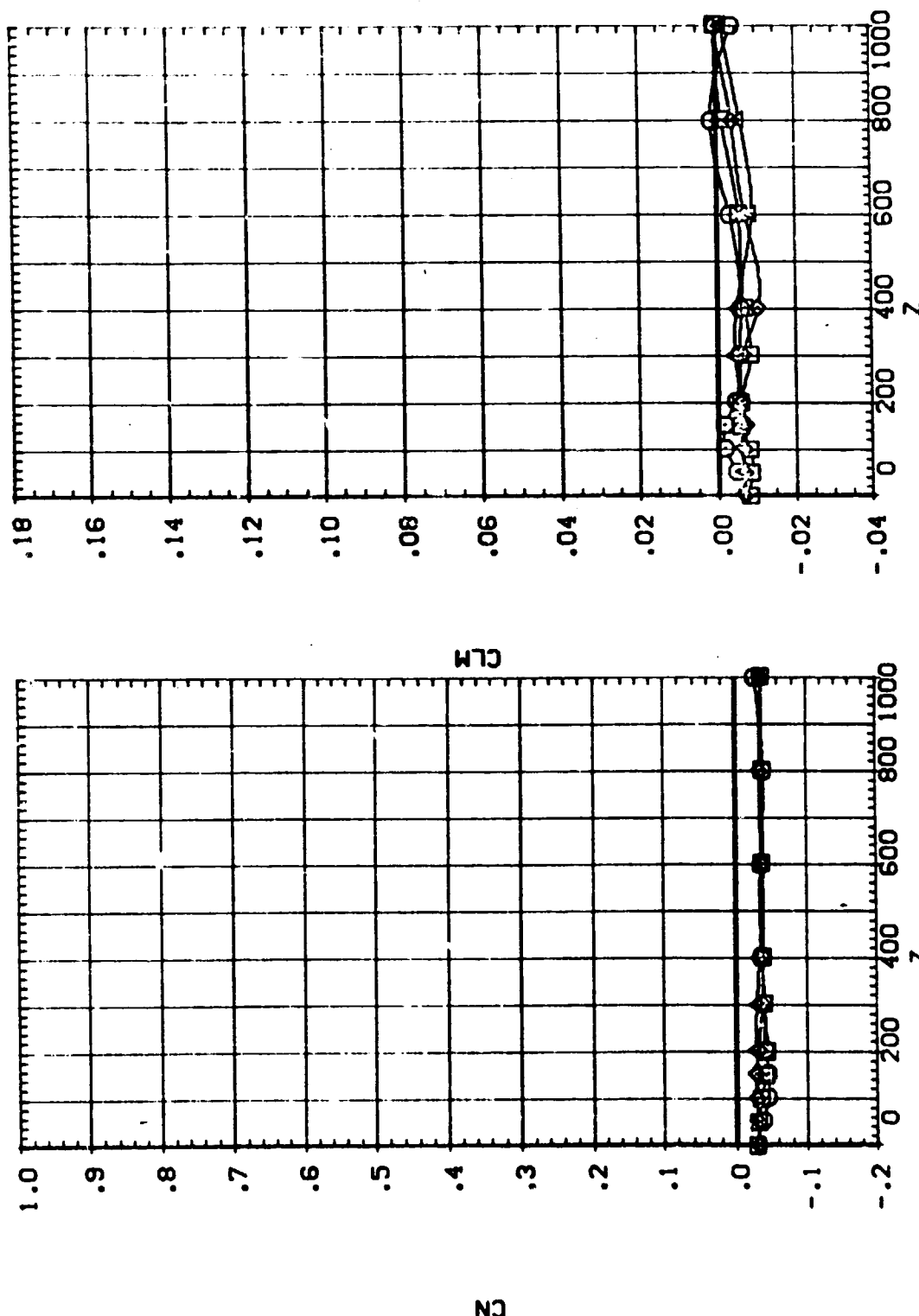


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ330)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|------------|-------------------|---------|------|-------|
| | | MACH | PTOTAL | BETA | PCH#8 |
| ○ | .340 | 4.530 | 110.000 | .000 | .000 |
| □ | .300, .400 | .000 | .000 | .000 | .000 |
| ◇ | .600, .490 | -5.000 | .000 | .000 | .000 |
| △ | .900, .750 | 200.000 | PCH#8 | .000 | .000 |



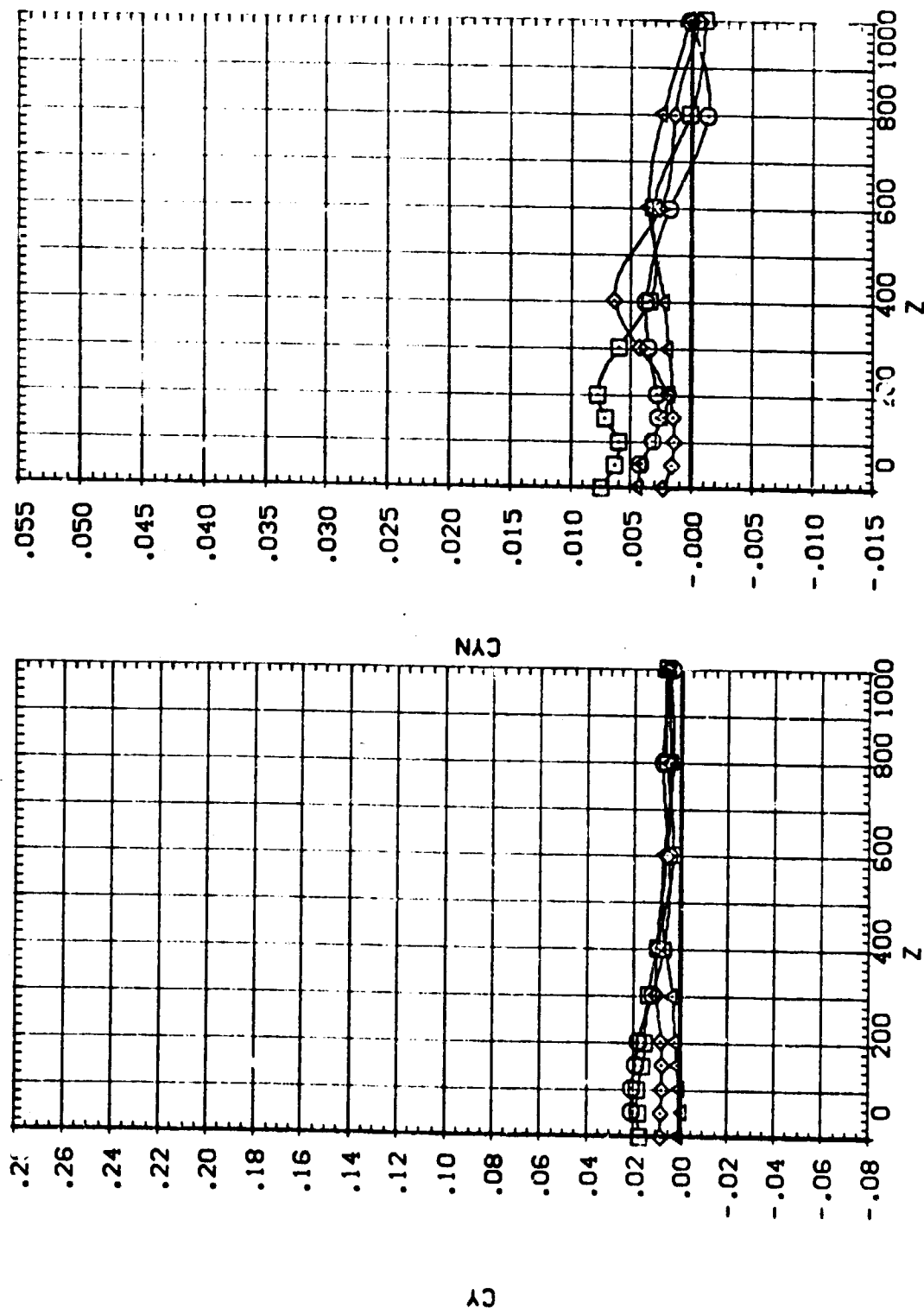
IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ330)

SYMBOL X

PARAMETRIC VALUES

| SYMBOL | X | MACH | ALPHA | DALPHA | Y | PTOTAL | BETA | DBETA | PCHEB |
|--------|---------|-------|-------|--------|---------|---------|------|-------|-------|
| ○ | .340 | 4.530 | .000 | -5.000 | 200.000 | 110.000 | .000 | .000 | .000 |
| □ | 300.400 | | | | | | | | |
| ◇ | 600.490 | | | | | | | | |
| △ | 900.750 | | | | | | | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

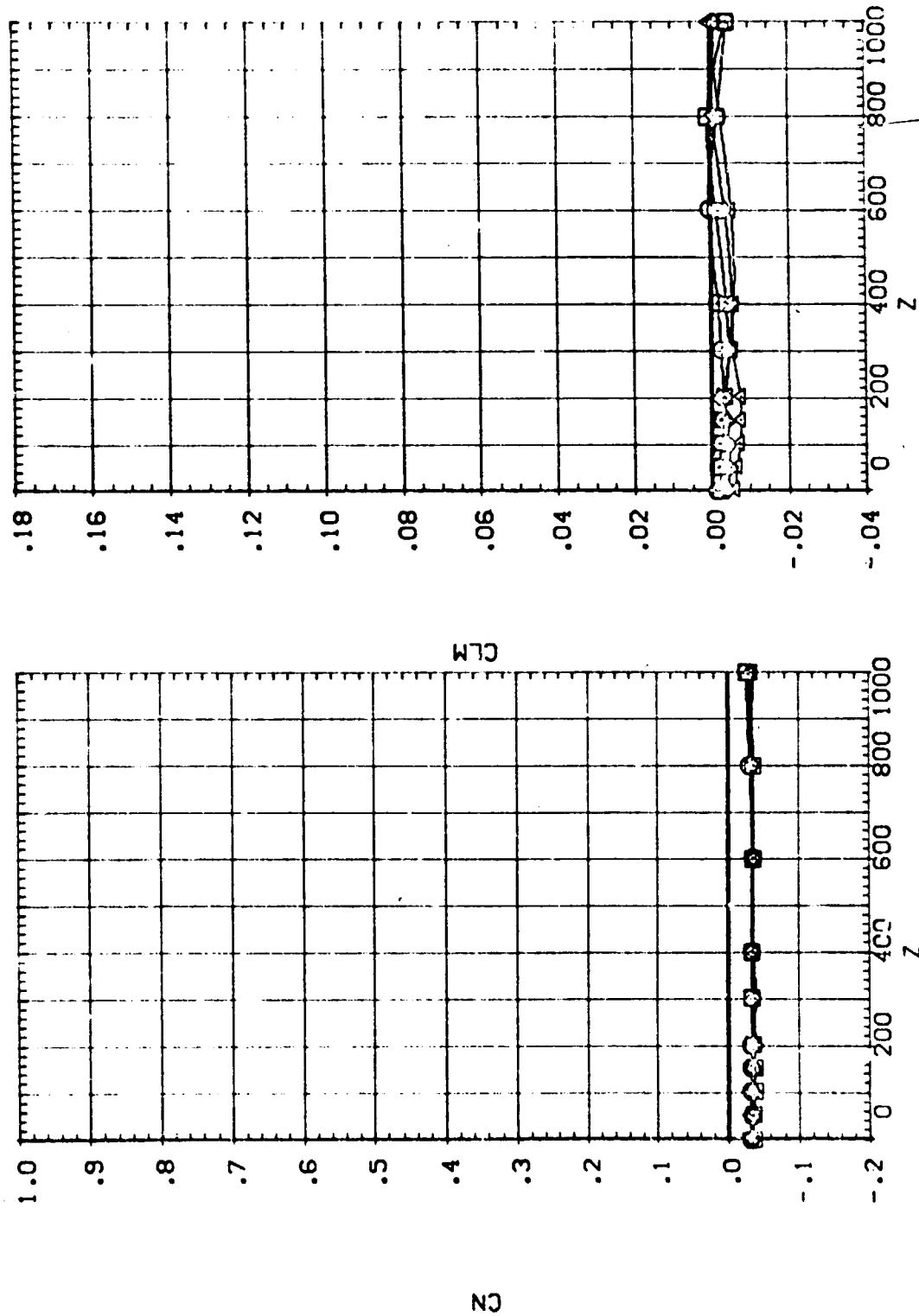


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ331)

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|--------|
| | | MACH | PI/DIAL | BETA | PC-MBR |
| ○ | .178 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.370 | .000 | BETA | .000 | .000 |
| ◇ | 600.510 | -5.000 | DBETA | .000 | .000 |
| △ | 900.600 | 400.000 | PC-MBR | .000 | .000 |

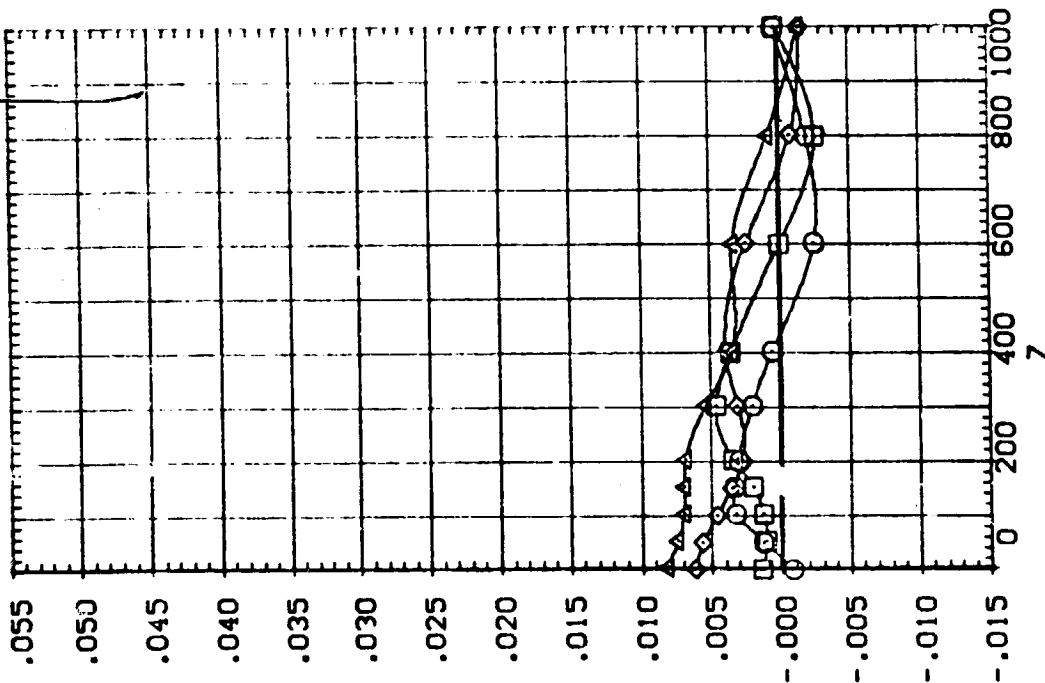
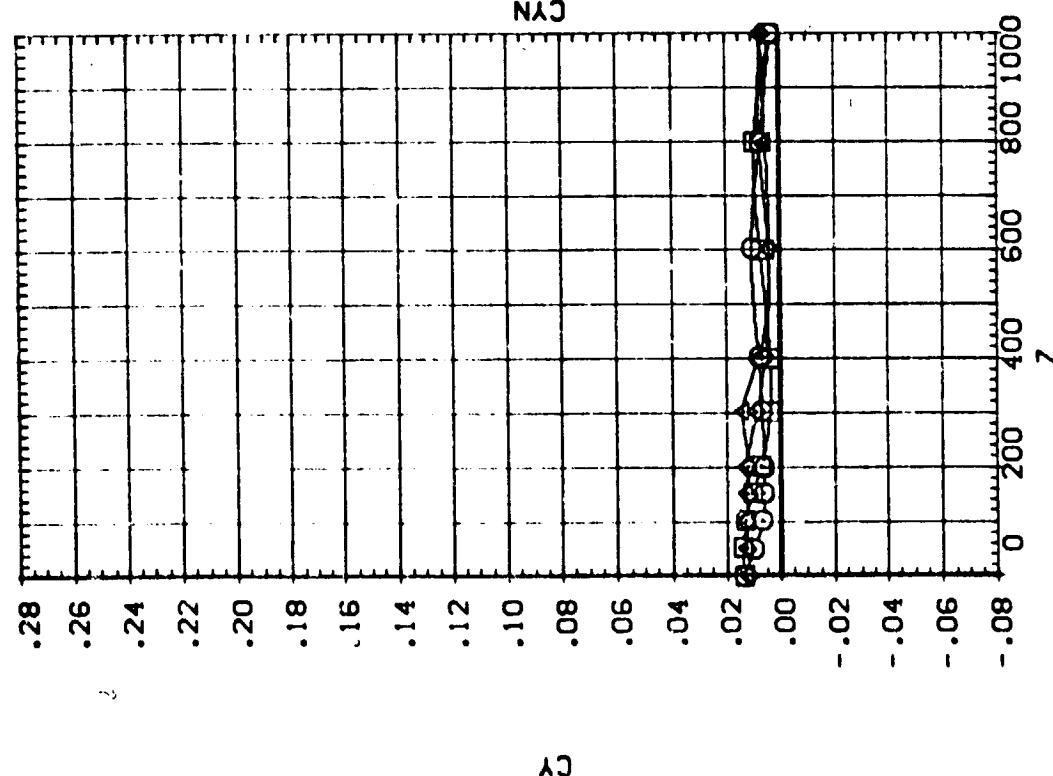
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ331)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | 300.370 | 4.530 | P TOTAL 110.000 |
| □ | 600.510 | .000 | BETA .000 |
| ◇ | 900.600 | -5.000 | DBETA .000 |
| △ | | 400.000 | PC-MER .000 |

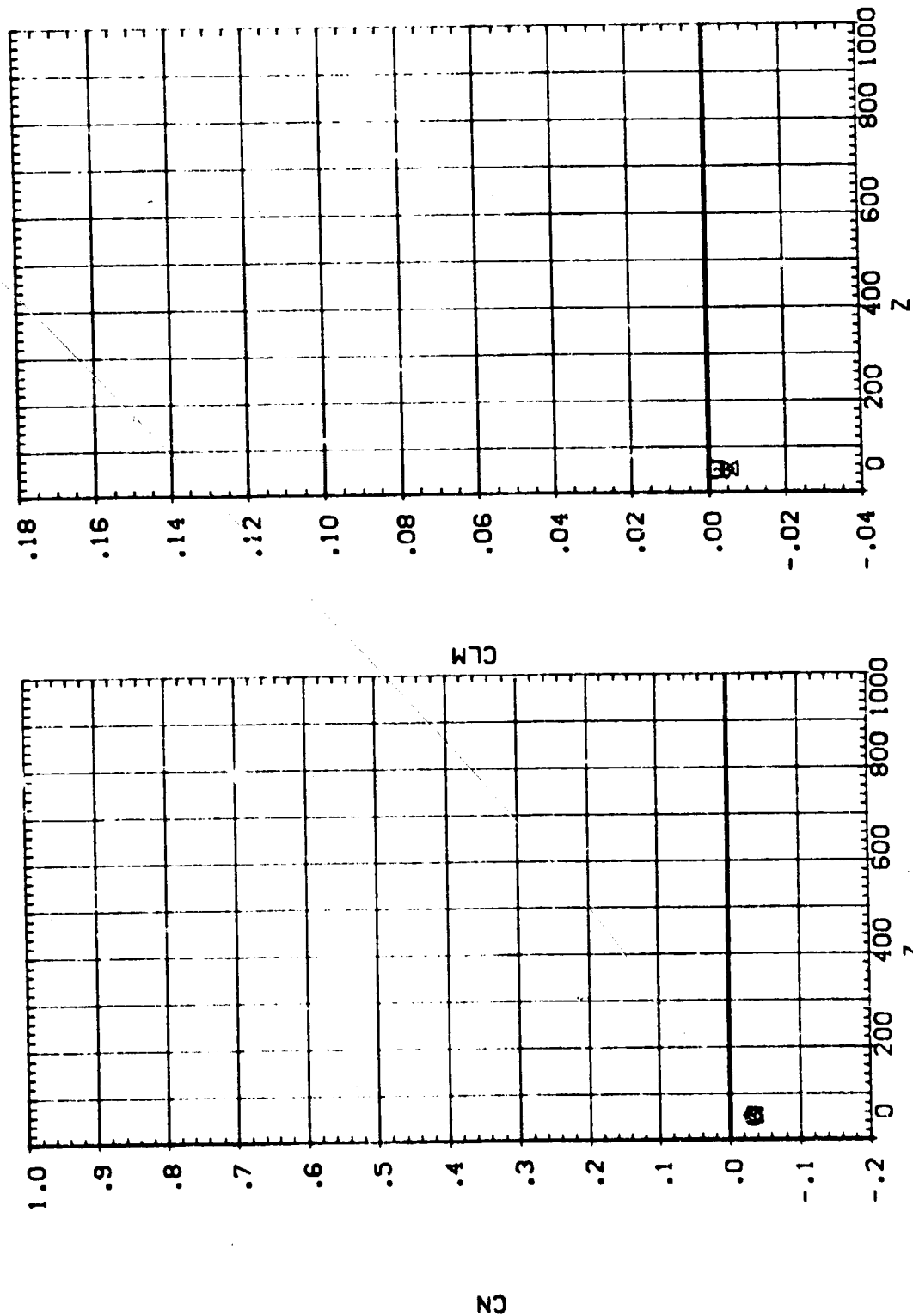


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ332)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|-------|
| | | MACH | PTOTAL | BETA | DBETA |
| ○ | .117 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.350 | .000 | .000 | .000 | .000 |
| ◇ | 600.520 | -5.000 | .000 | .000 | .000 |
| △ | 900.710 | Y | 800.000 | PCI+BR | .000 |

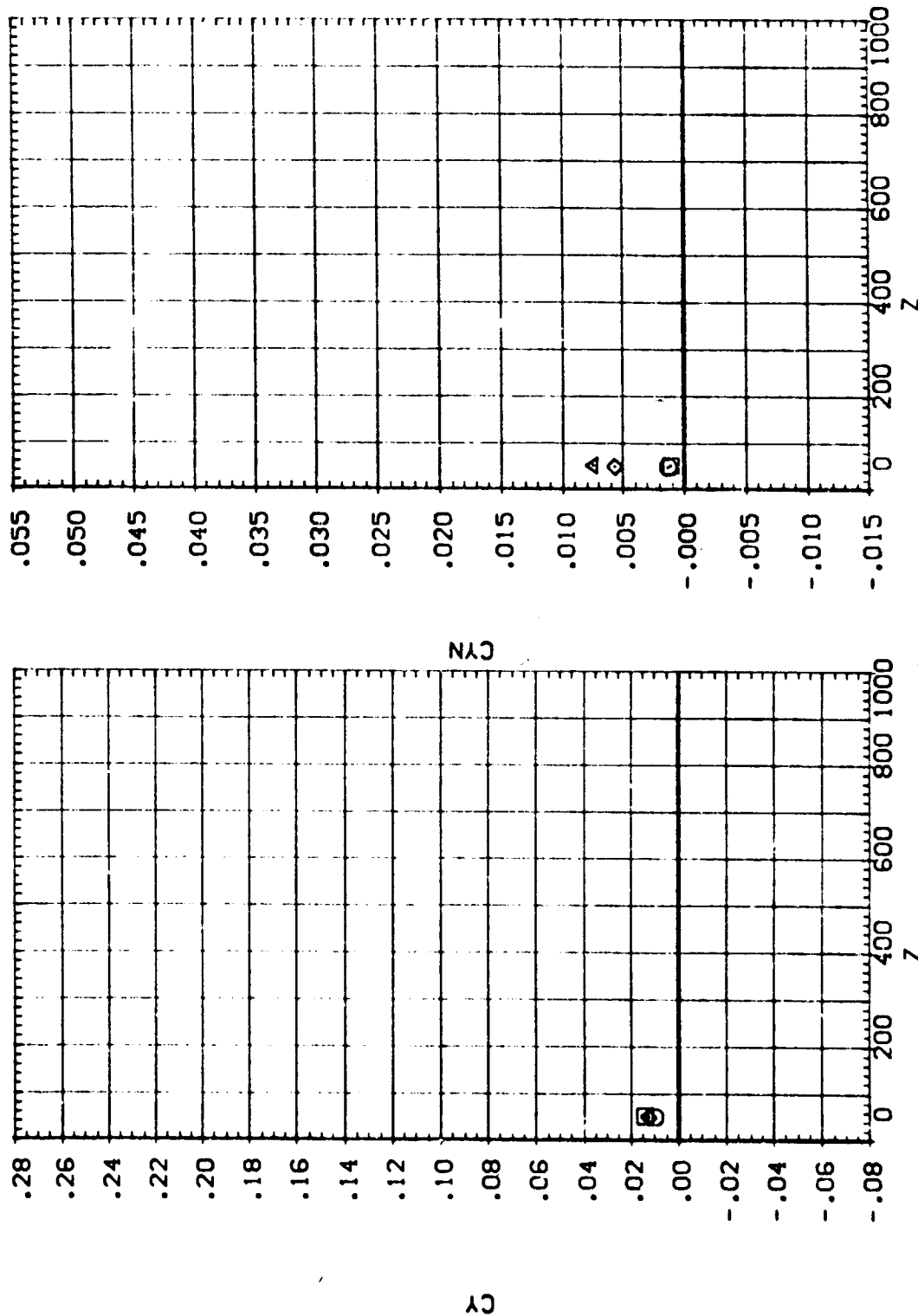


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ332)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | |
|--------|---------|---------|-------------------|---------|
| ○ | .117 | 4.530 | PTOTAL | 110.000 |
| □ | 300.350 | .000 | BETA | .000 |
| ◇ | 600.520 | -5.000 | DBETA | .000 |
| △ | 900.710 | 800.000 | PC-MGR | .000 |

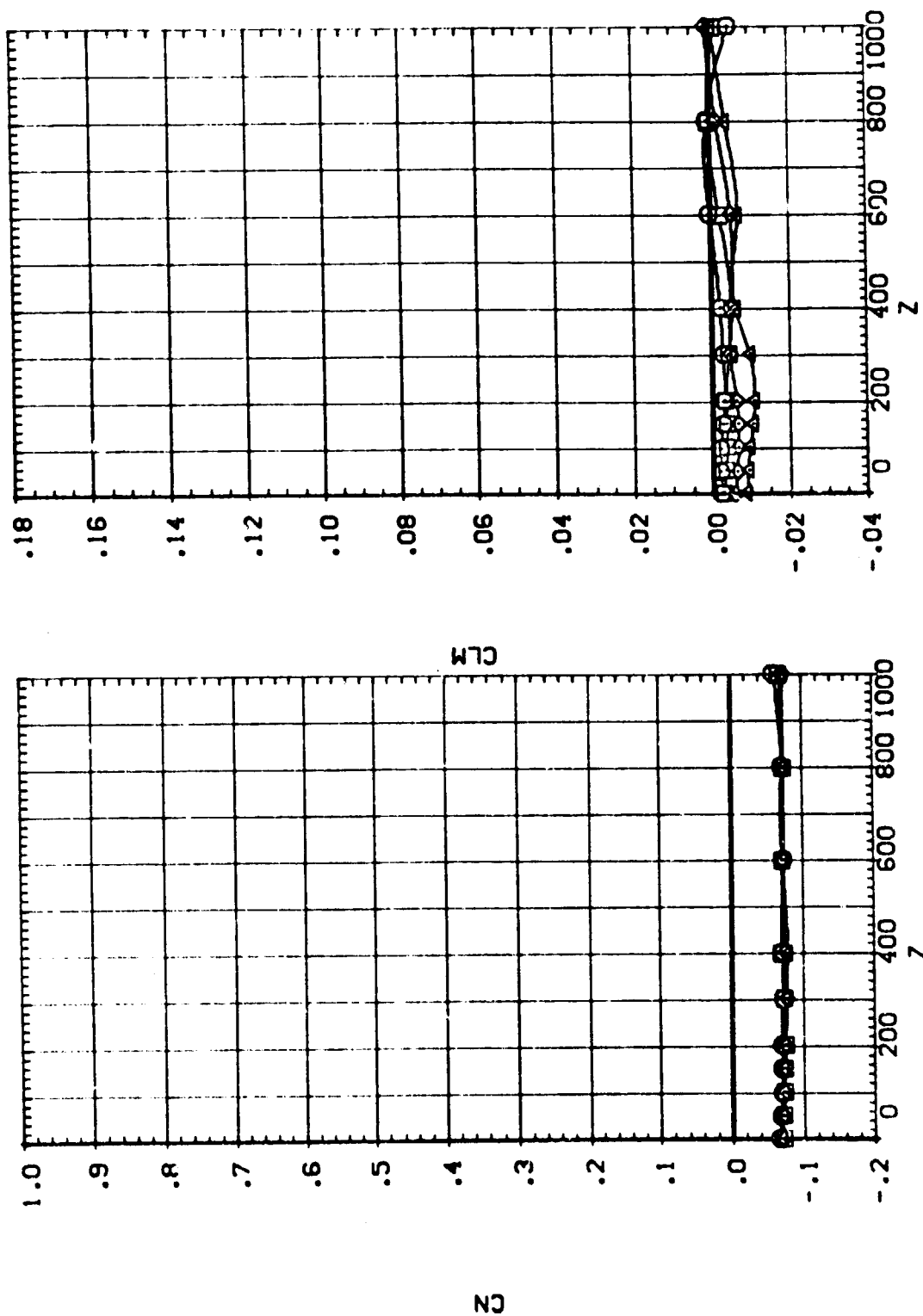


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ334)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | 300.530 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.430 | DALPHA | -10.000 | DBETA | .000 |
| △ | 900.820 | Y | 400.000 | PC+R | .000 |

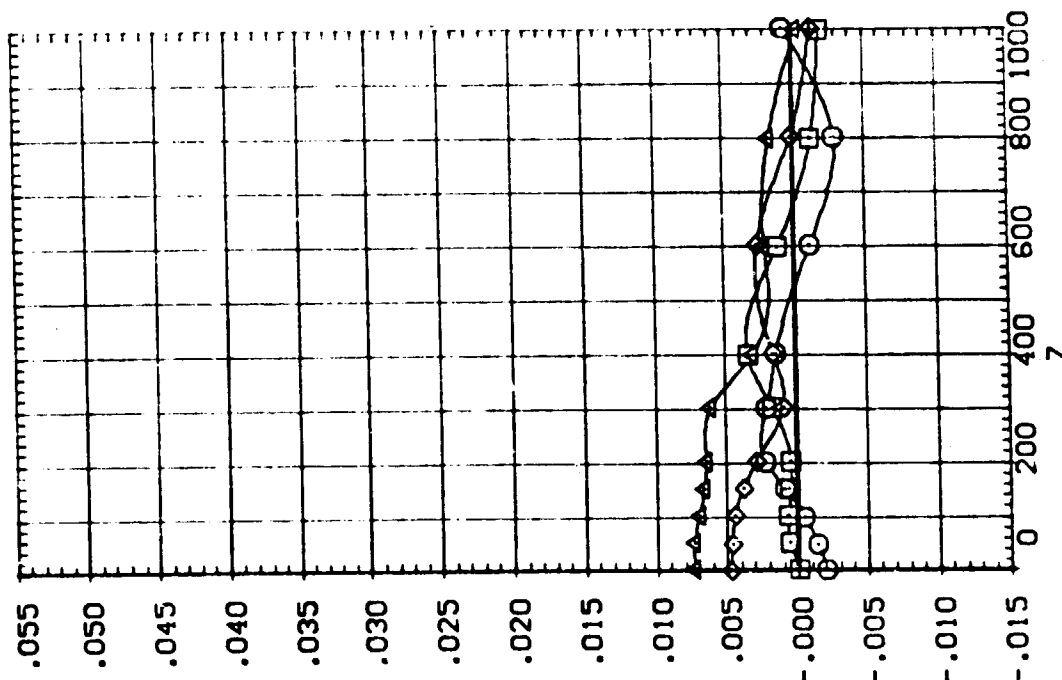
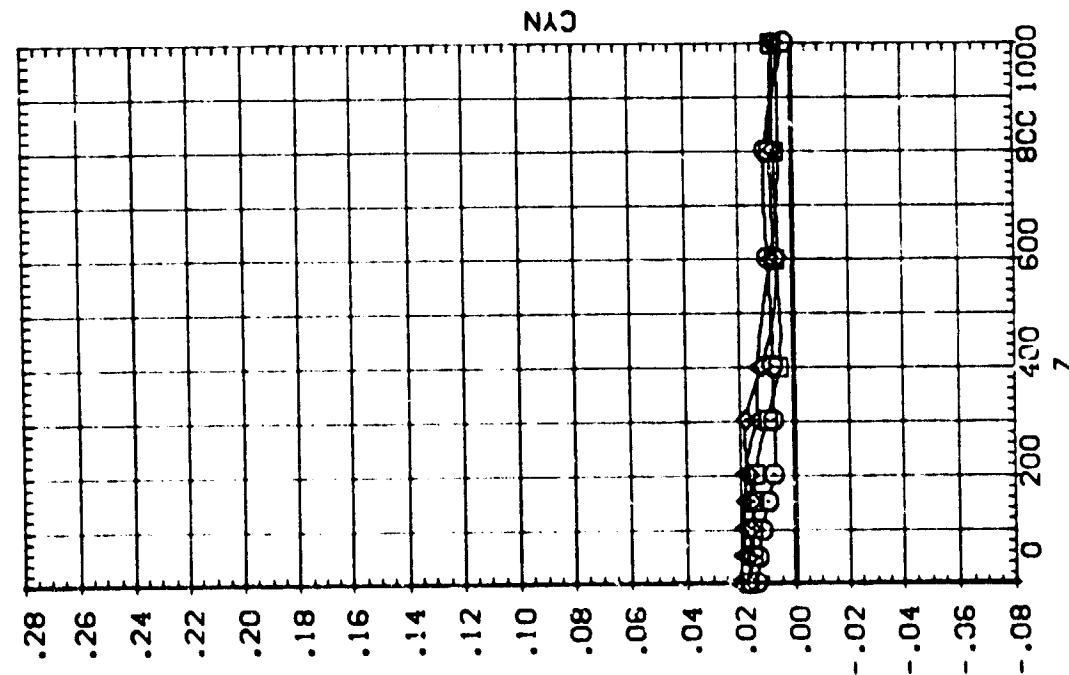


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ334)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| X | MACH | PARAMETRIC VALUES | | | |
|---------|--------|-------------------|--------|---------|--|
| | | 4.530 | PTOTAL | 110.000 | |
| 300.530 | ALPHA | .000 | BETA | .000 | |
| 600.430 | DALPHA | -10.000 | DBETA | .000 | |
| 900.820 | Y | 400.000 | PC-MBR | .000 | |

SYMBOL
 ○
 □
 ◇
 △

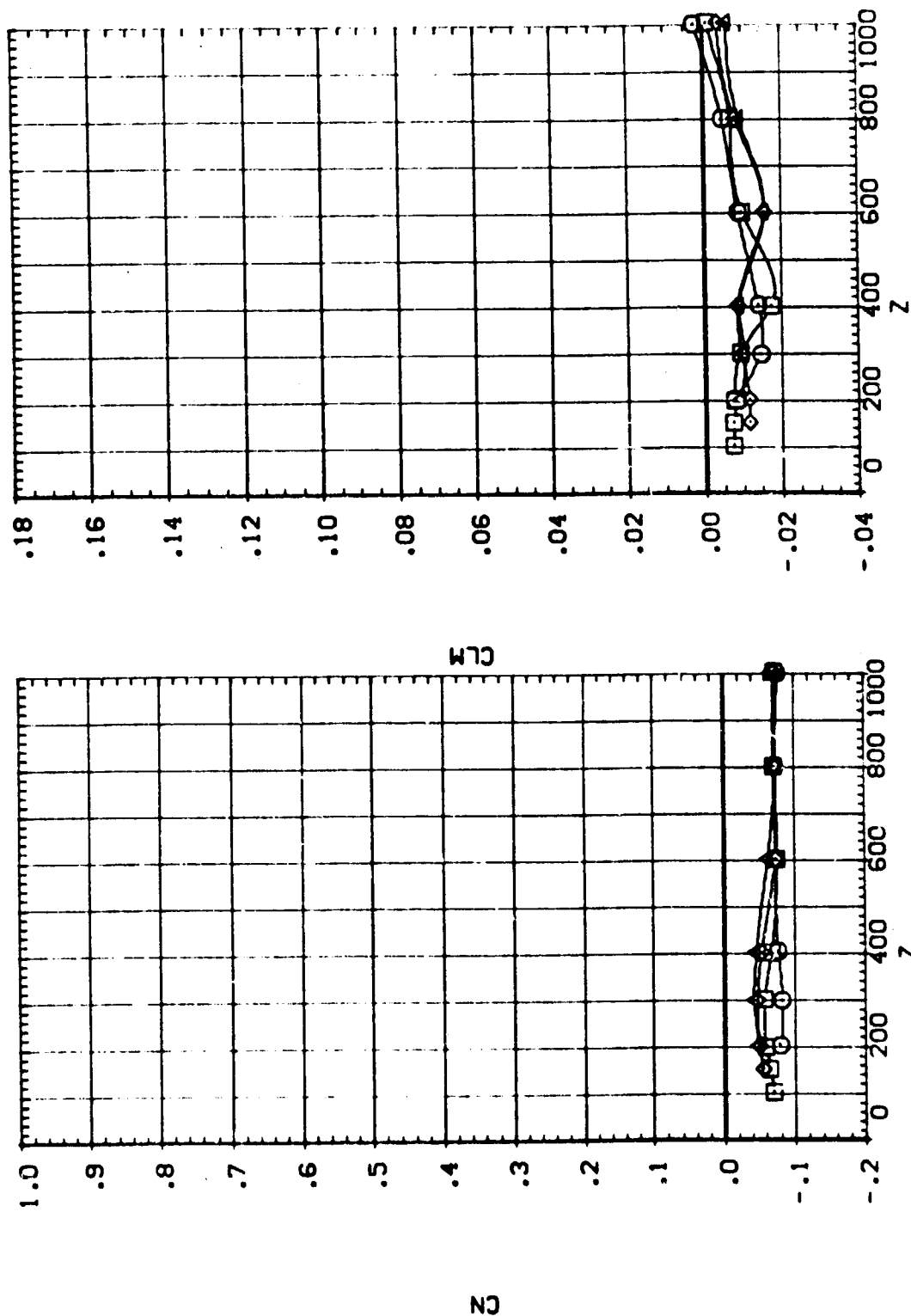


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ335)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | TOTAL | 110.000 | |
| ○ | 300.490 | ALPHA | .000 | BETA | .000 | |
| □ | 600.610 | DALPHA | -10.000 | DBETA | .000 | |
| ◇ | 900.830 | Y | .000 | PC-MBR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM C9T10 (RTJ335)

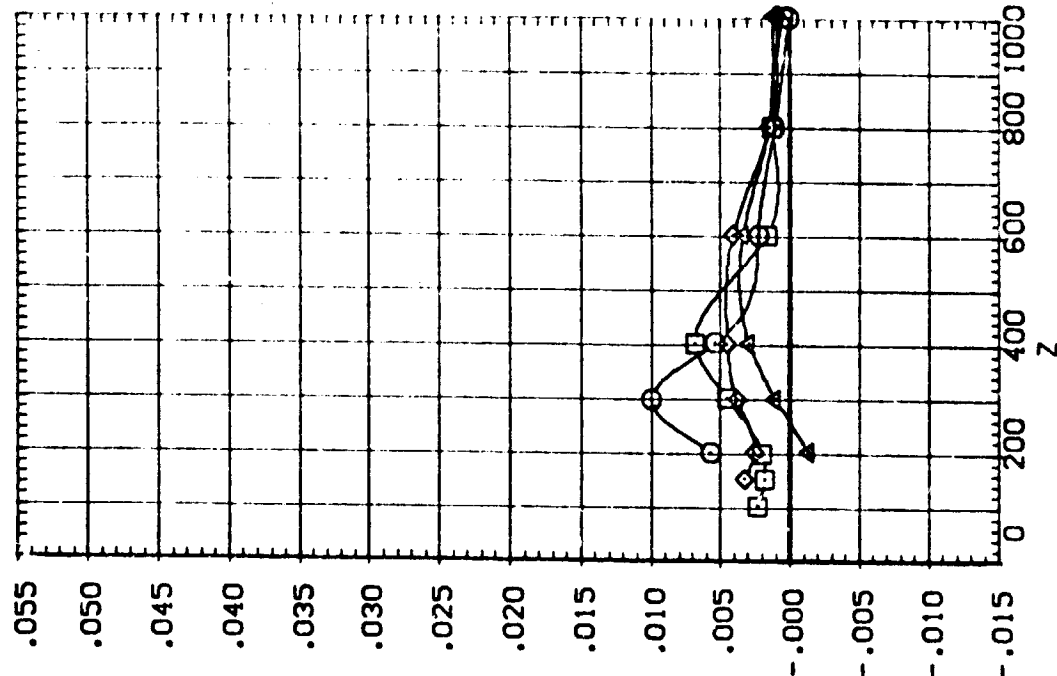
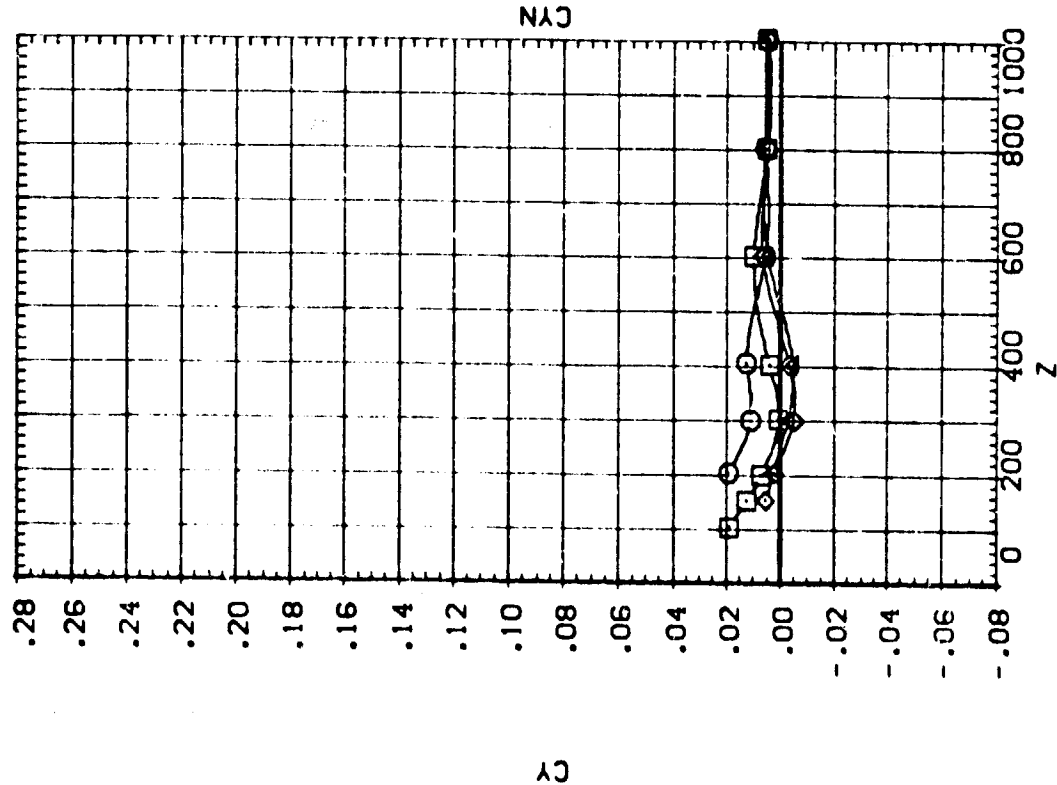
SYMBOL

-
-
- ◇
- △

PARAMETRIC VALUES

| | | | | |
|---------|--------|---------|--------|---------|
| .315 | MACH | 4.530 | PTOTAL | 110.000 |
| 300.490 | ALPHA | .000 | BETA | .000 |
| 600.610 | DALPHA | -10.000 | DBETA | .000 |
| 900.830 | Y | .000 | PCORR | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

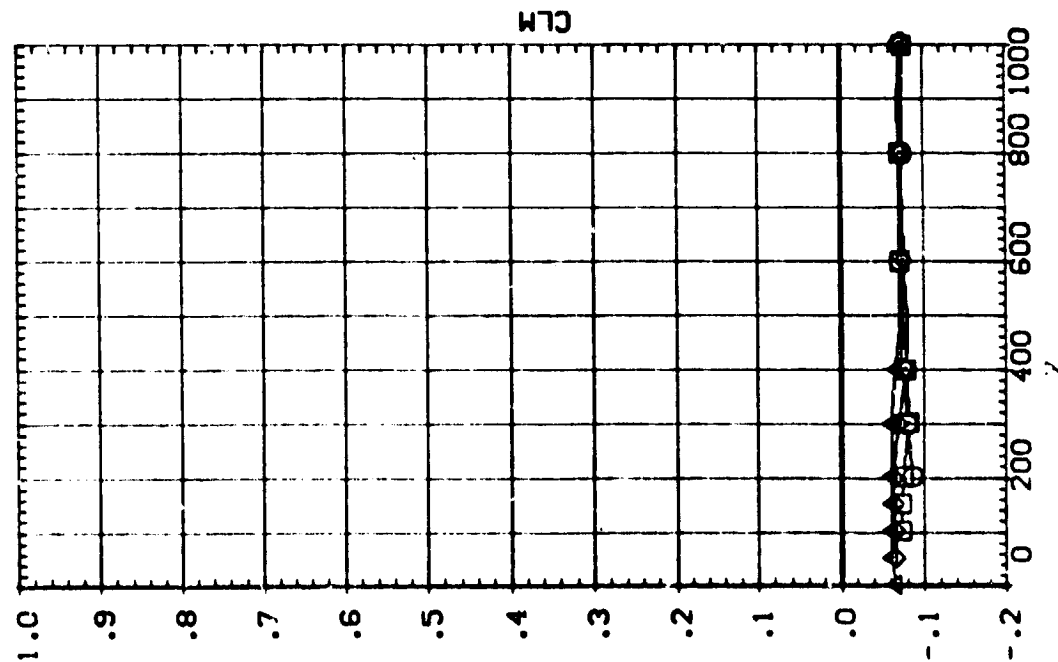
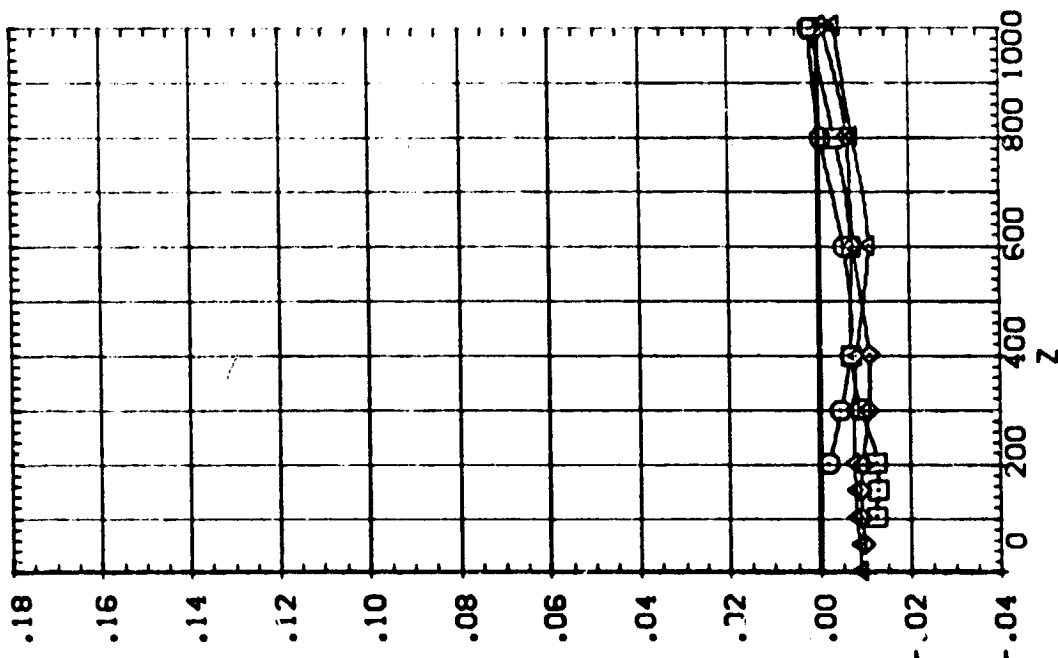


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM C9T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ336)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | .220 | ALPHA | PTOTAL 110.000 |
| □ | 300.650 | BETA | .000 |
| ◇ | 600.570 | DBETA | -10.000 |
| △ | 900.770 | PC-HSR | .070 |

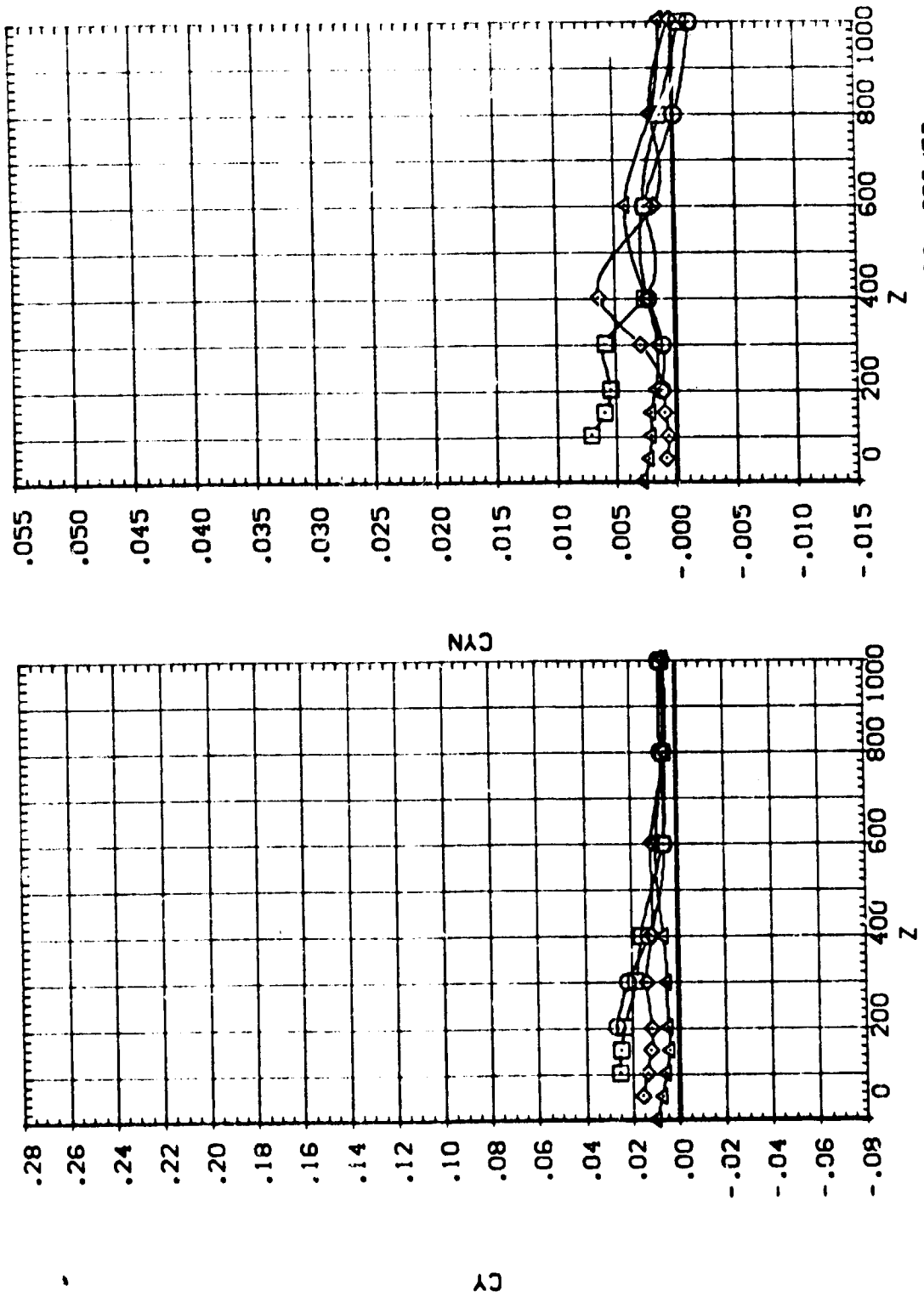


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ336)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|---------|---------|--|
| | | MACH | 4.530 | P TOTAL | 110.000 | |
| ○ | 300.65C | ALPHA | .000 | BETA | .000 | |
| □ | 600.570 | DALPHA | -10.000 | DBETA | .000 | |
| ◇ | 900.770 | Y | 200.000 | PC-HBR | .000 | |

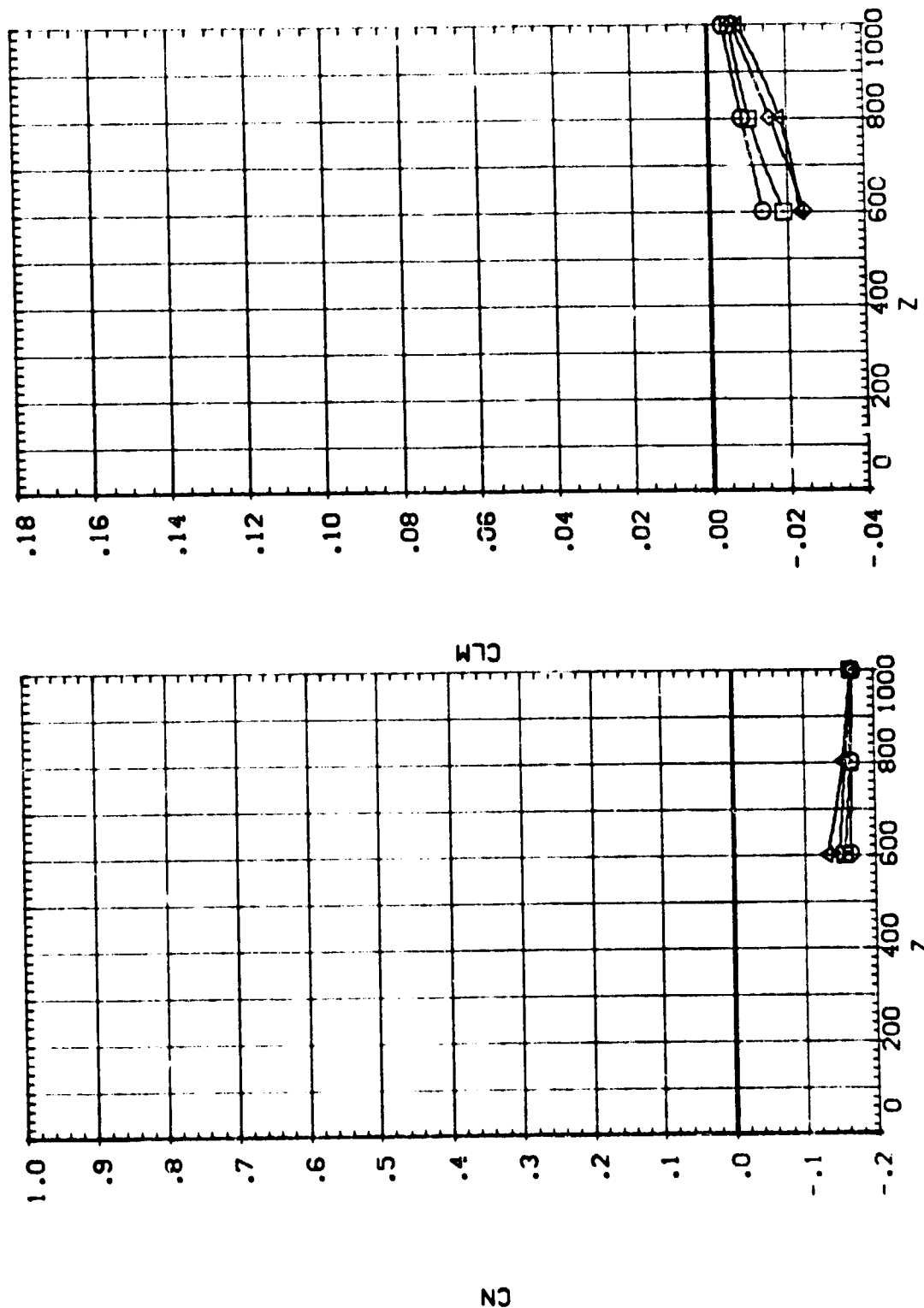


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ337)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

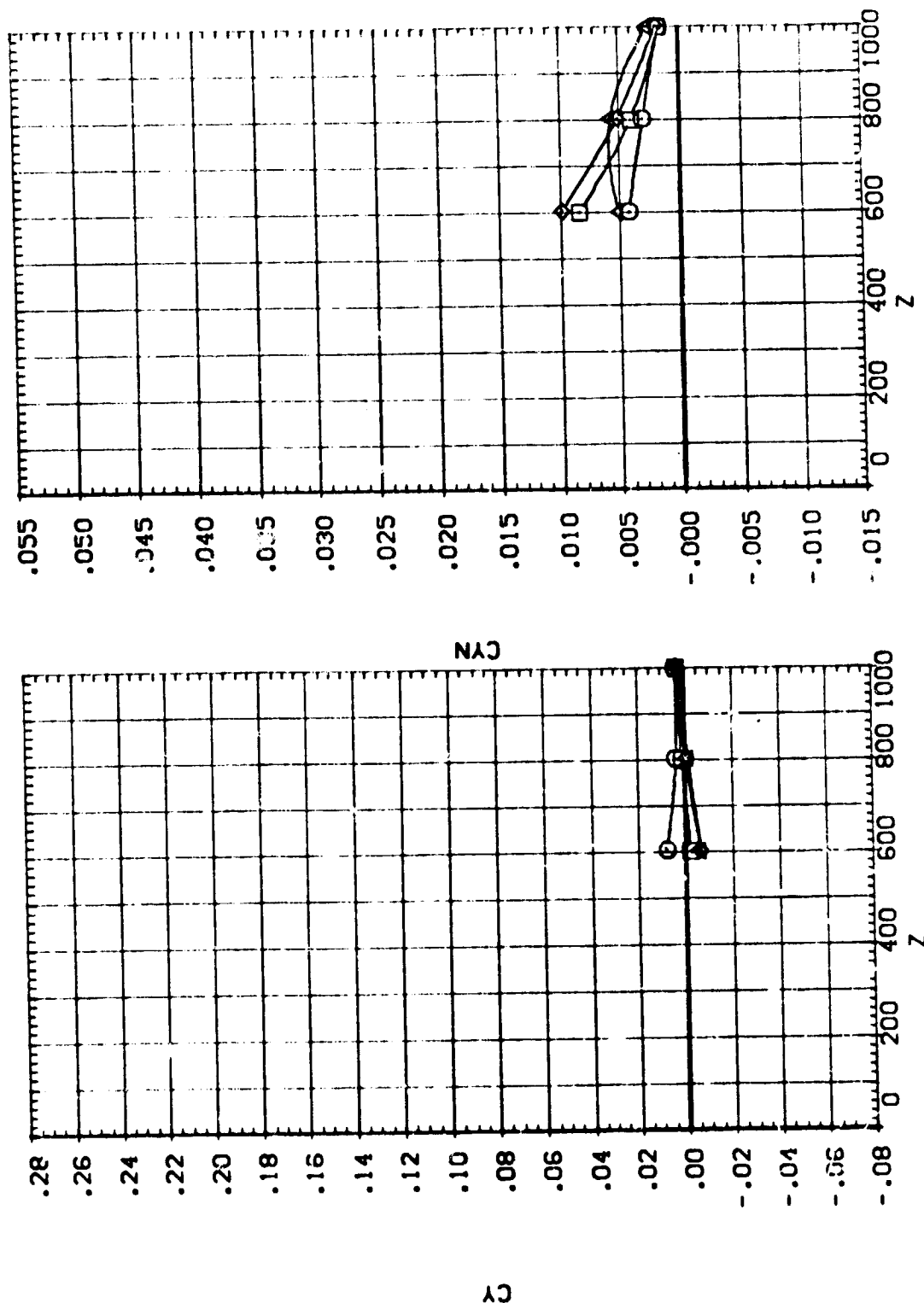
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|--|
| | | MAC-1 | 4.530 | POTIAL | 110.000 | |
| ○ | 300.400 | ALPHA | .000 | BETA | .000 | |
| □ | 600.700 | DALPHA | -27.000 | DBETA | .000 | |
| △ | 899.730 | Y | .000 | PCHGR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RIJ337)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTAL | 110.000 |
|--------|---------|--------|-------------------|--------|---------|
| □ | .471 | ALPHA | .000 | BETA | .000 |
| ◇ | 300.400 | DALPHA | -20.000 | DBETA | .000 |
| △ | 600.700 | Y | .000 | PC-HBR | .000 |
| | 899.730 | | | | |

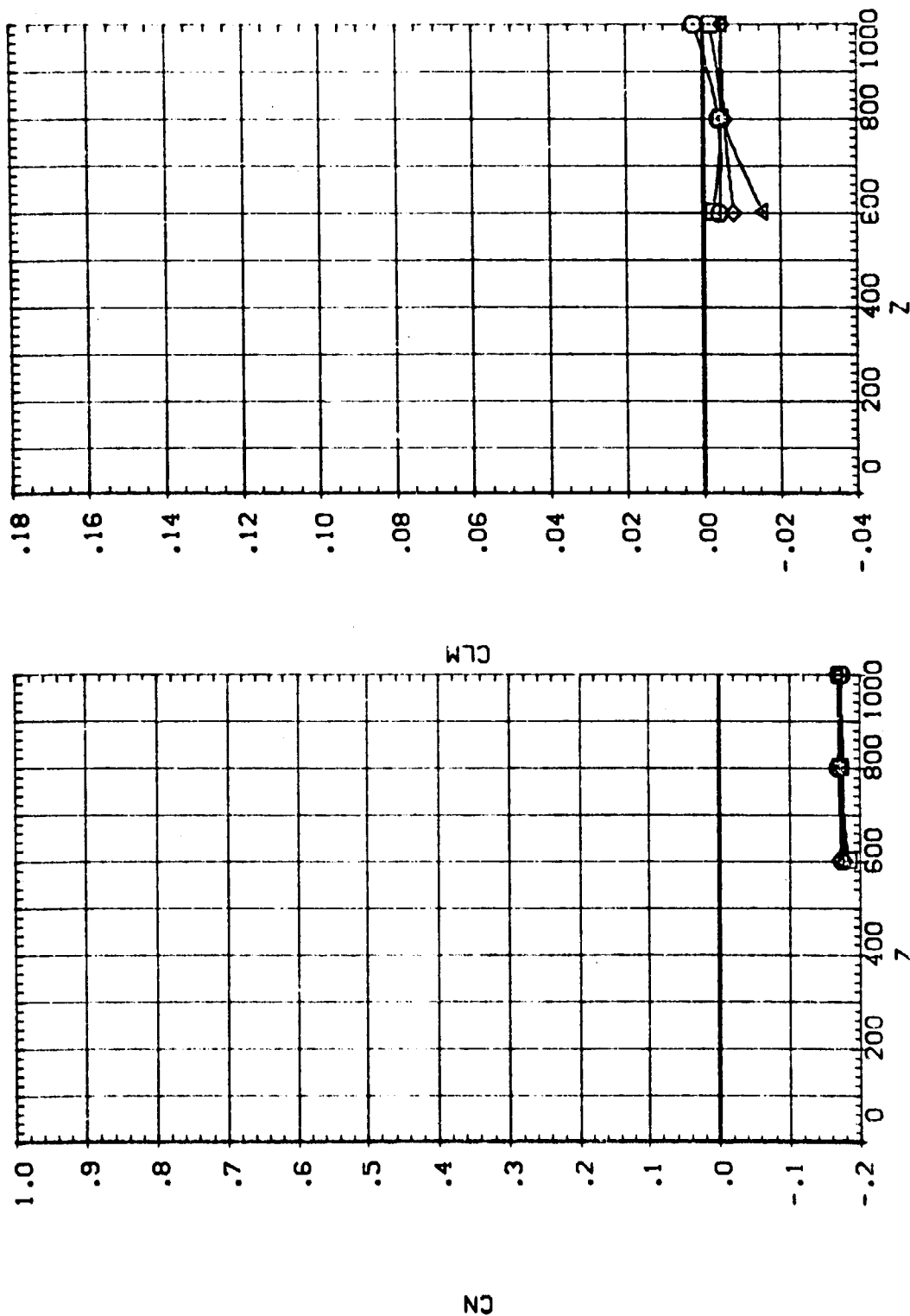


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ338)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

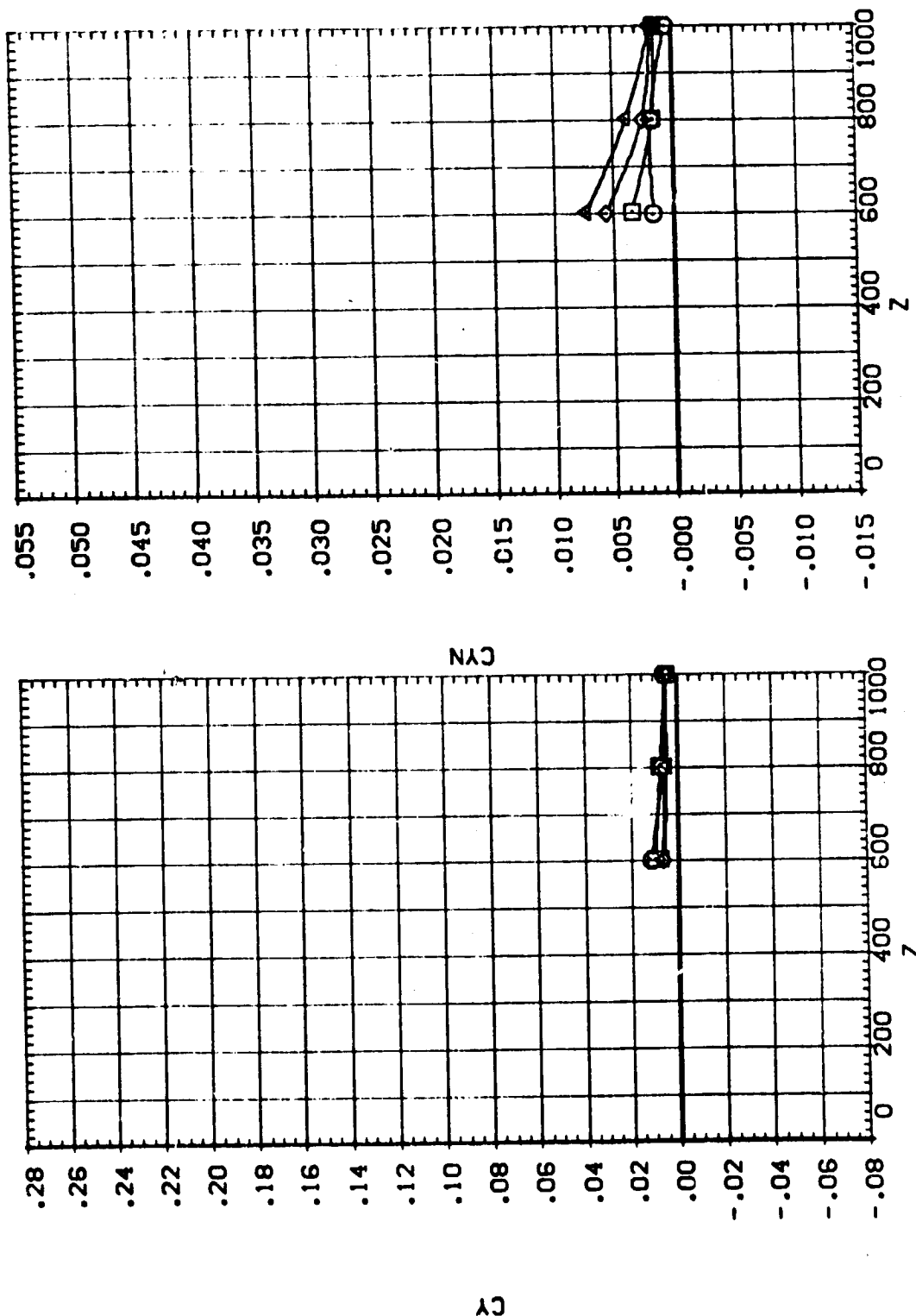
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.640 | ALPHA | .000 | BETA | .000 | |
| □ | 600.080 | DALPHA | -20.000 | DBETA | .000 | |
| ◇ | 901.080 | Y | 200.000 | PCFBR | .000 | |



1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ338)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|-------|
| | | MACH | PTOTAL | BETA | DBETA |
| ○ | -.057 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.640 | .000 | .000 | .000 | .000 |
| ◇ | 600.080 | -20.000 | .000 | .000 | .000 |
| △ | 901.080 | 200.000 | PC-HSR | | |

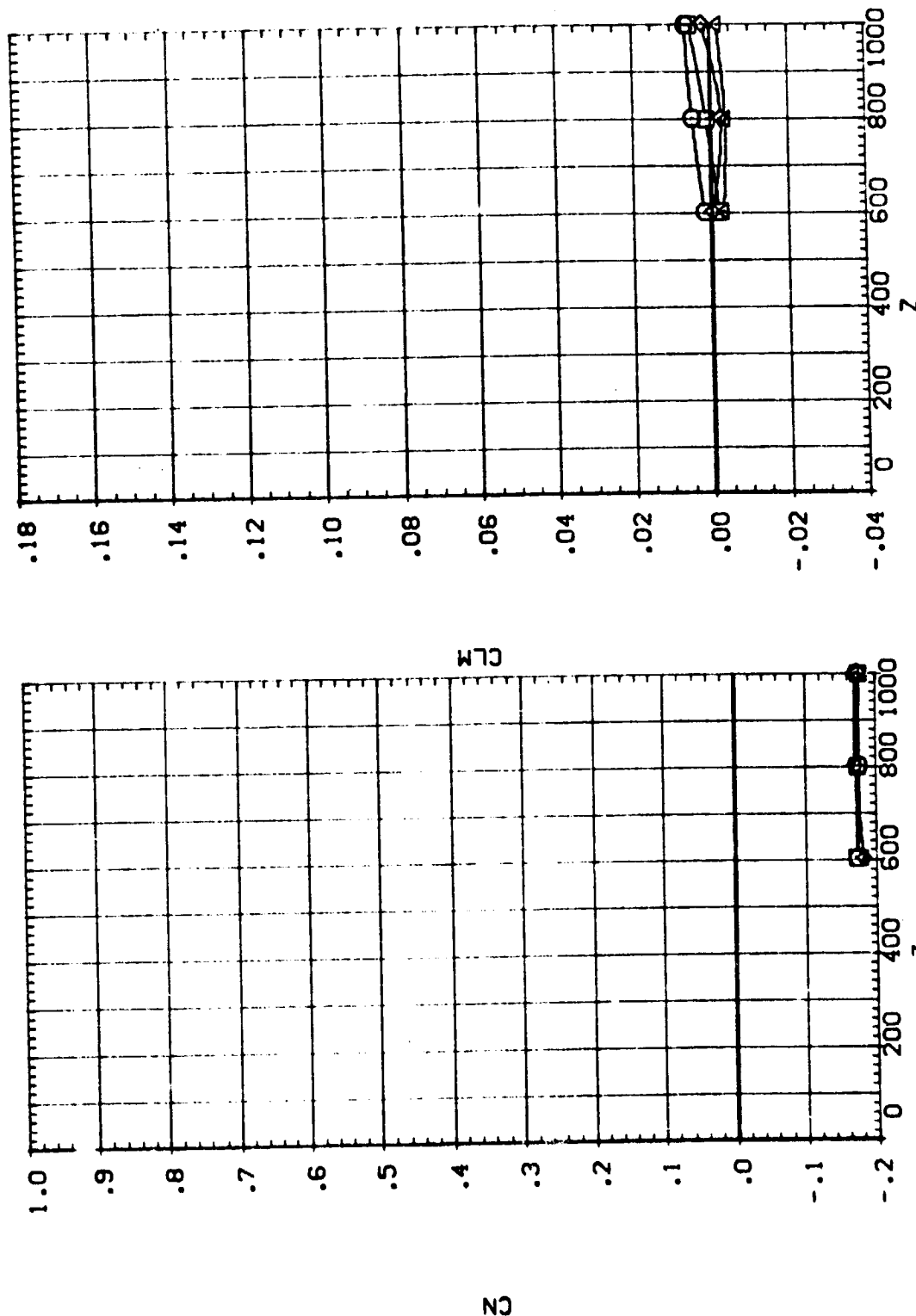


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ339)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|--------|
| | | MACH | PTOTAL | BETA | PC-HBR |
| ○ | .358 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.510 | .000 | .000 | .000 | .000 |
| ◇ | 600.700 | -20.000 | .000 | .000 | .000 |
| △ | 900.850 | 400.000 | .000 | .000 | .000 |

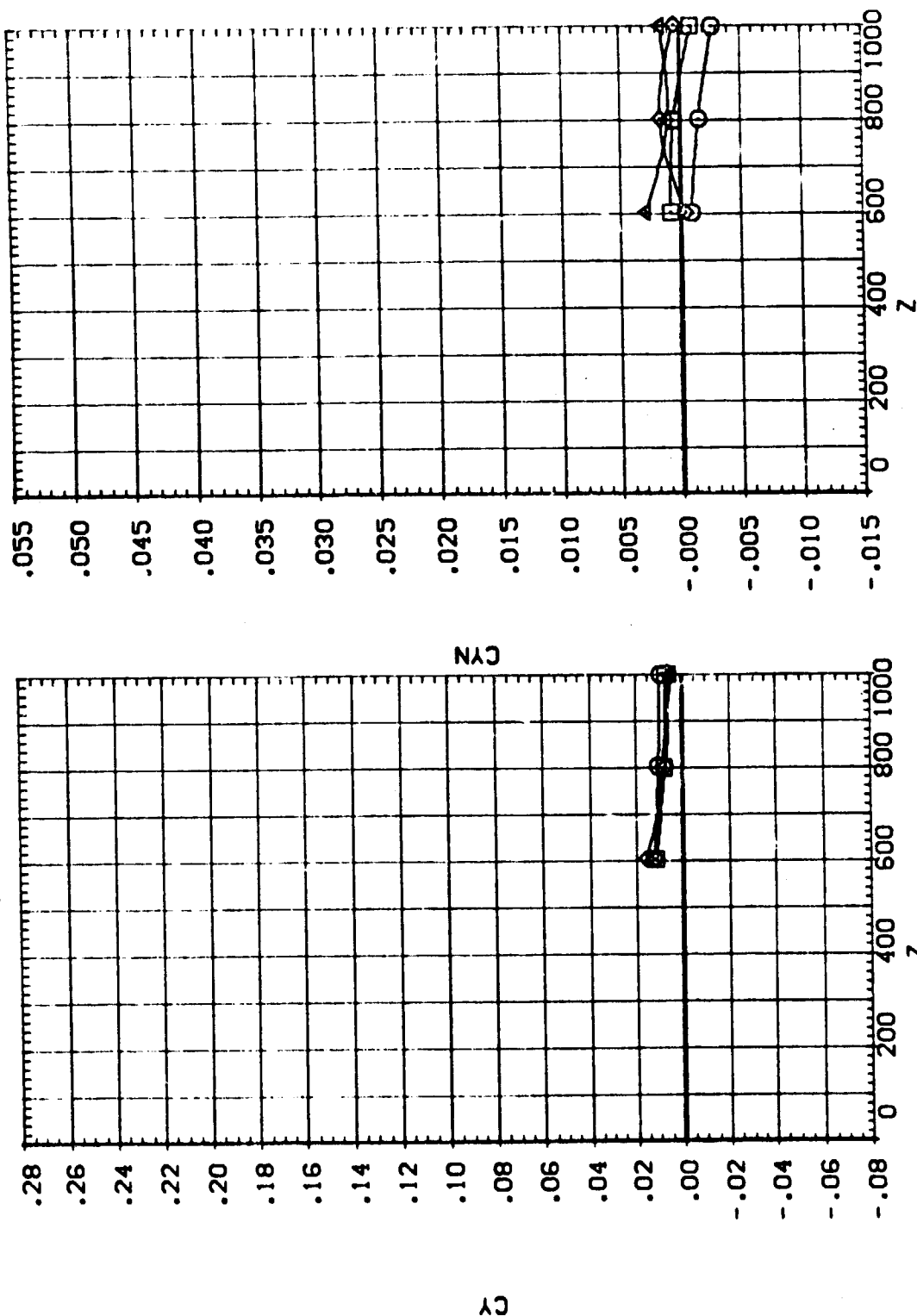


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ339)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH PARAMETRIC VALUES
 ○ 300.510 4.530 PTOTAL 110.000
 □ 600.700 .000 BETA .000
 ◇ 900.850 -20.000 DBETA .000
 △ 400.000 PCMBR



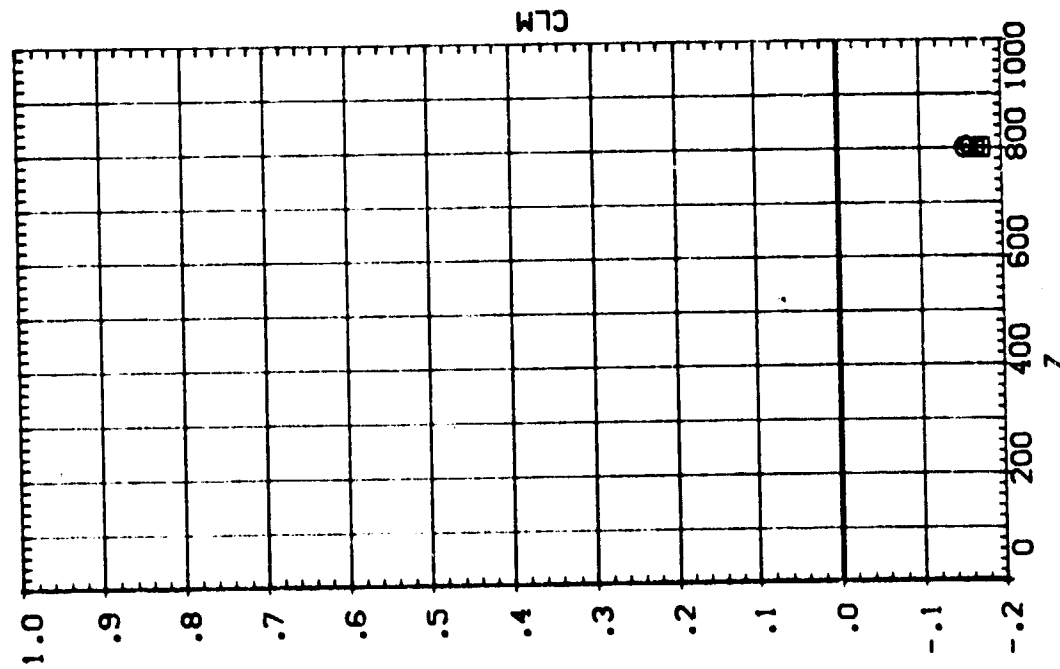
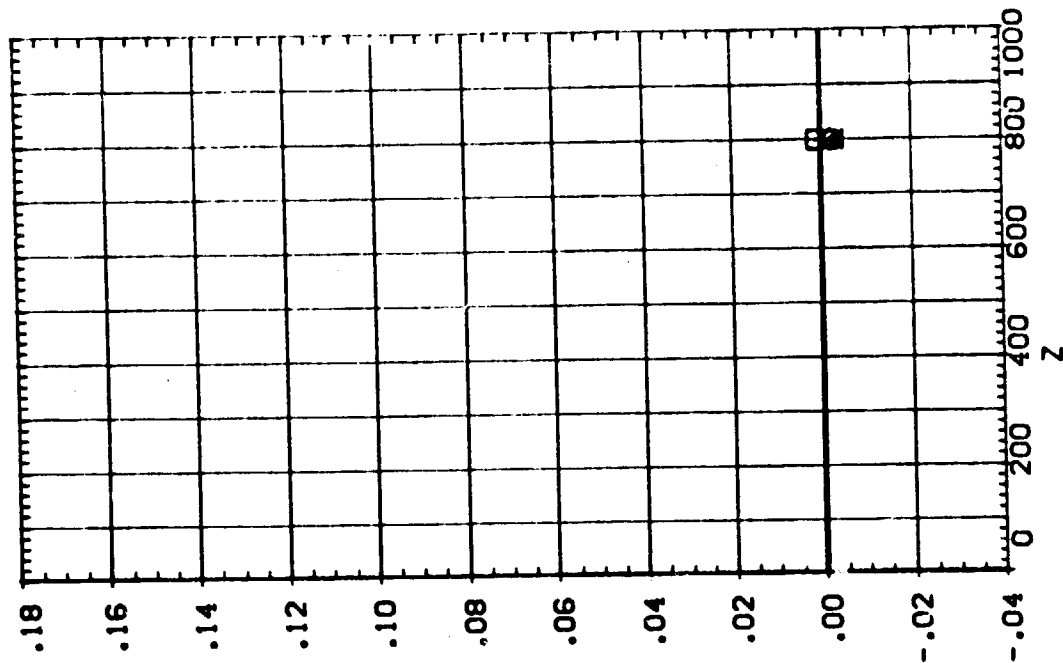
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET



1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ340)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | PIOTAL | 110.000 | |
| ○ | 300.110 | ALPHA | .000 | BETA | .000 | |
| □ | 600.540 | DALPHA | -20.000 | DBETA | .000 | |
| ◇ | 900.280 | Y | 400.000 | PC+PR | .000 | |

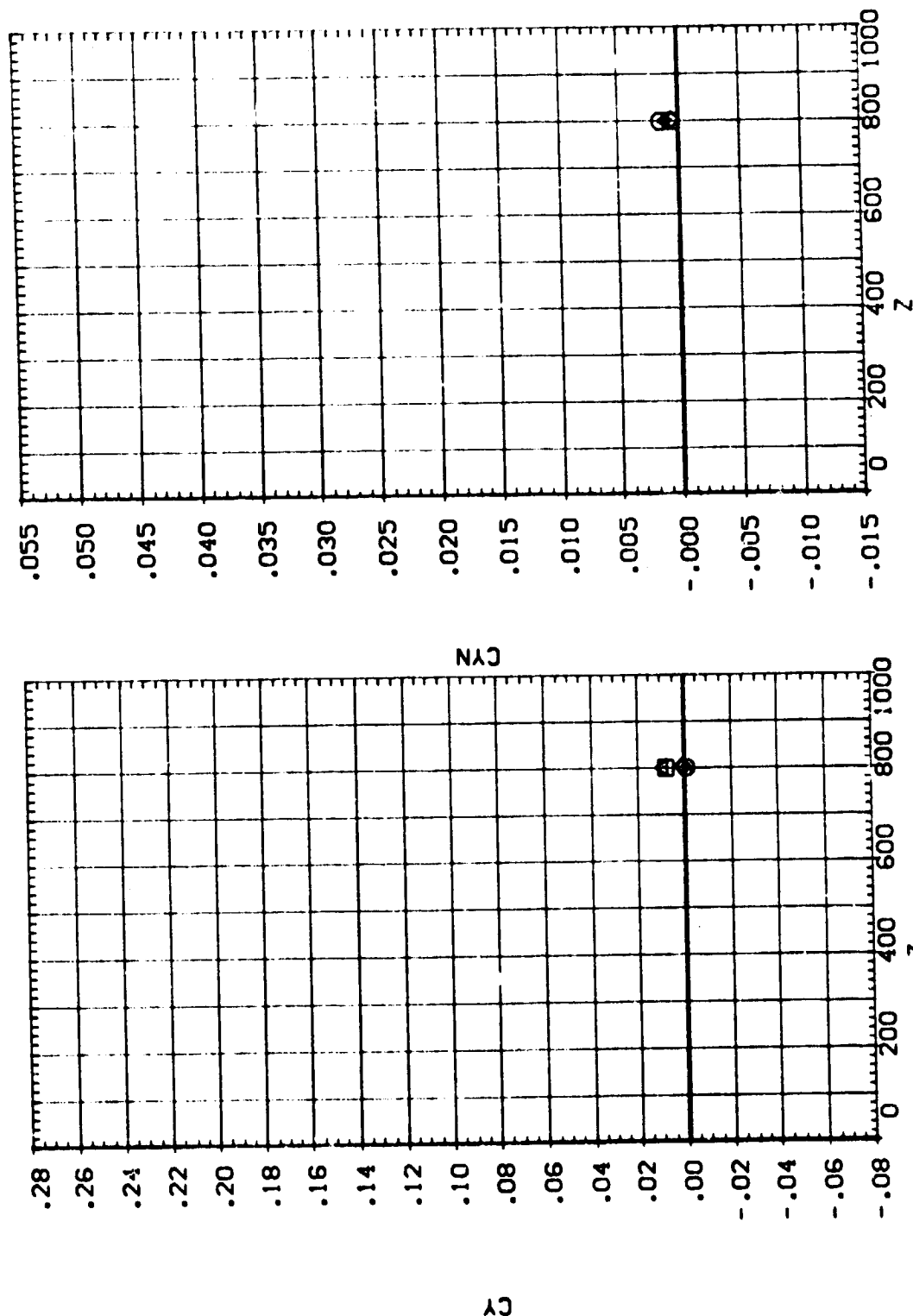


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ340)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | TOTAL | 110.000 | |
| ○ | 300.110 | ALPHA | .000 | BETA | .000 | |
| □ | 600.540 | DALPHA | -20.000 | DBETA | .000 | |
| ◇ | 900.280 | Y | 400.000 | PC-HSR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ341)

SYMBOL

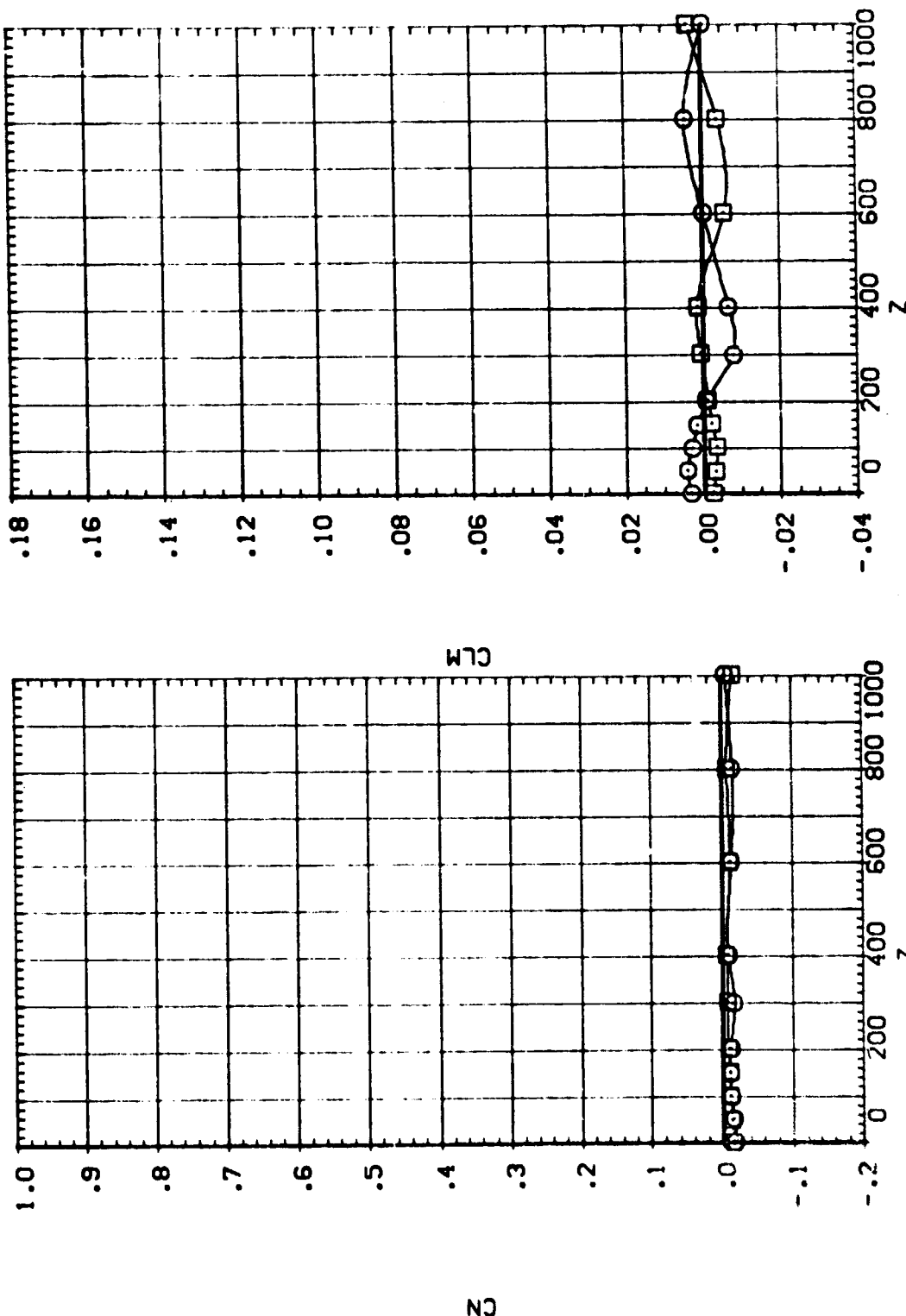
○

□

PARAMETRIC VALUES

| | MACH | PTOTAL | 110.000 |
|--------|---------|--------|---------|
| ALPHA | .195 | .000 | .000 |
| DALPHA | 500.530 | .000 | 5.000 |
| Y | | .000 | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

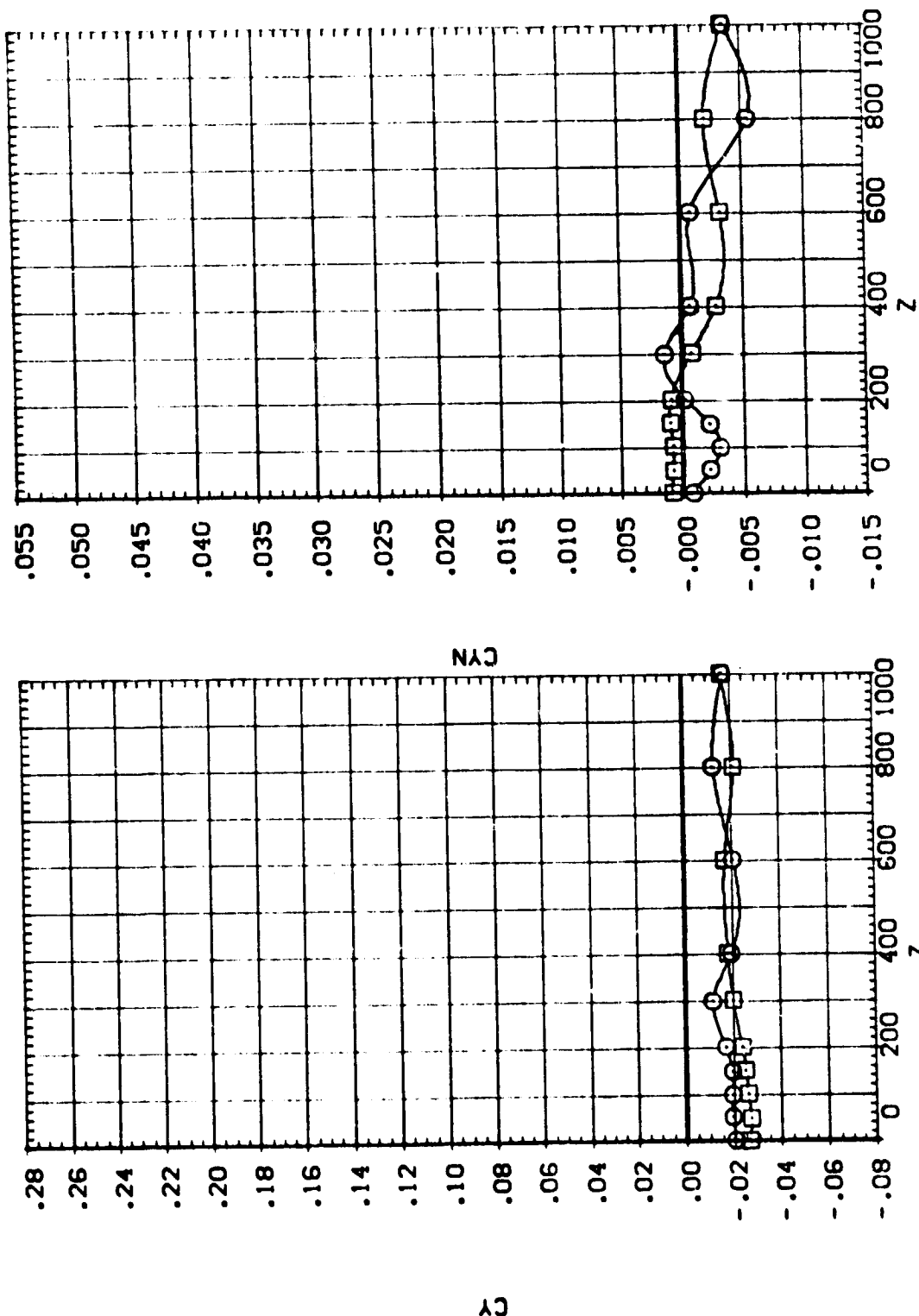


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ341)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | .195 | ALPHA | .000 | BETA | .000 | |
| □ | 900.530 | DALPHA | .000 | DBETA | 5.000 | |
| | | Y | .000 | PC-HBR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUME'S SEPARATING FROM 09T10 (RTJ342)

SYMBOL

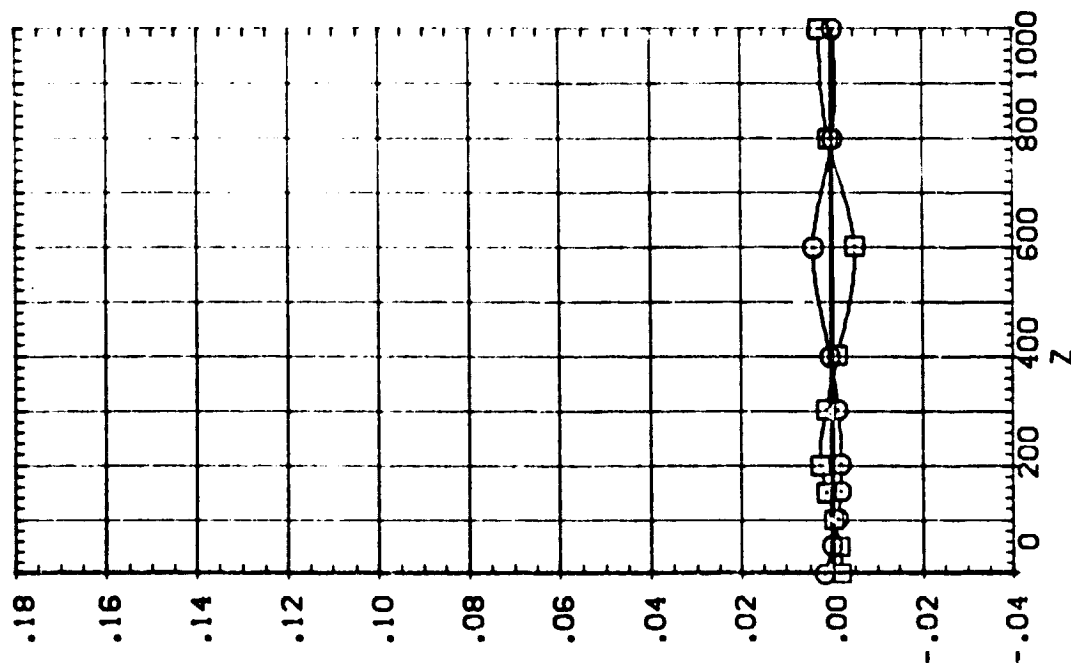
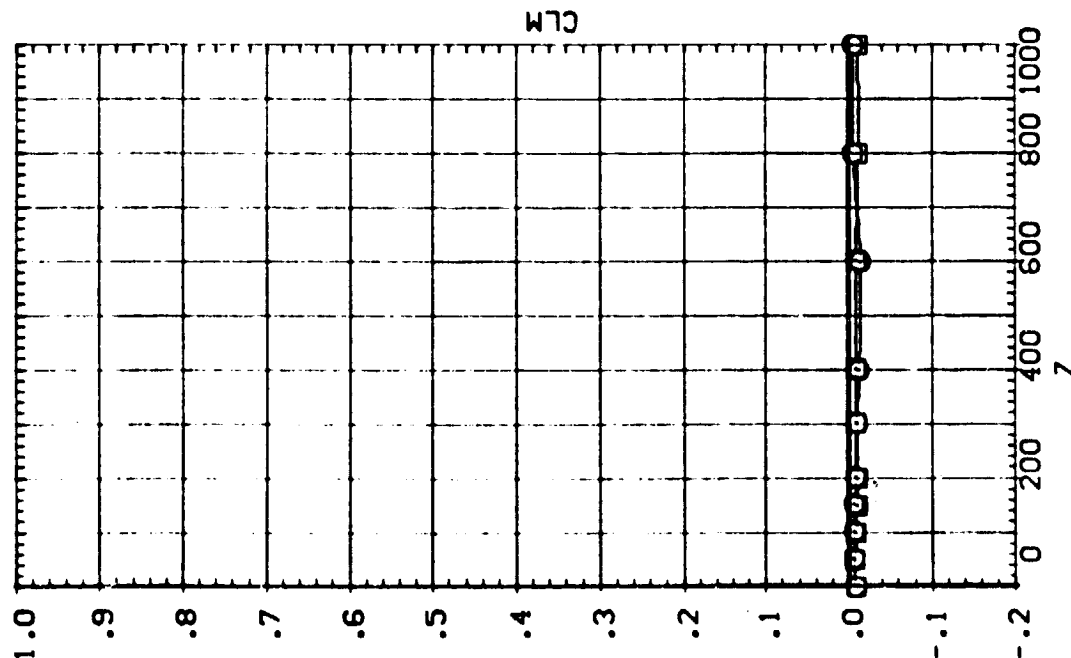
X

○ □

PARAMETR. C. VALUES

MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA .000 DBETA 5.000
 Y 200.000 PC-MER .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



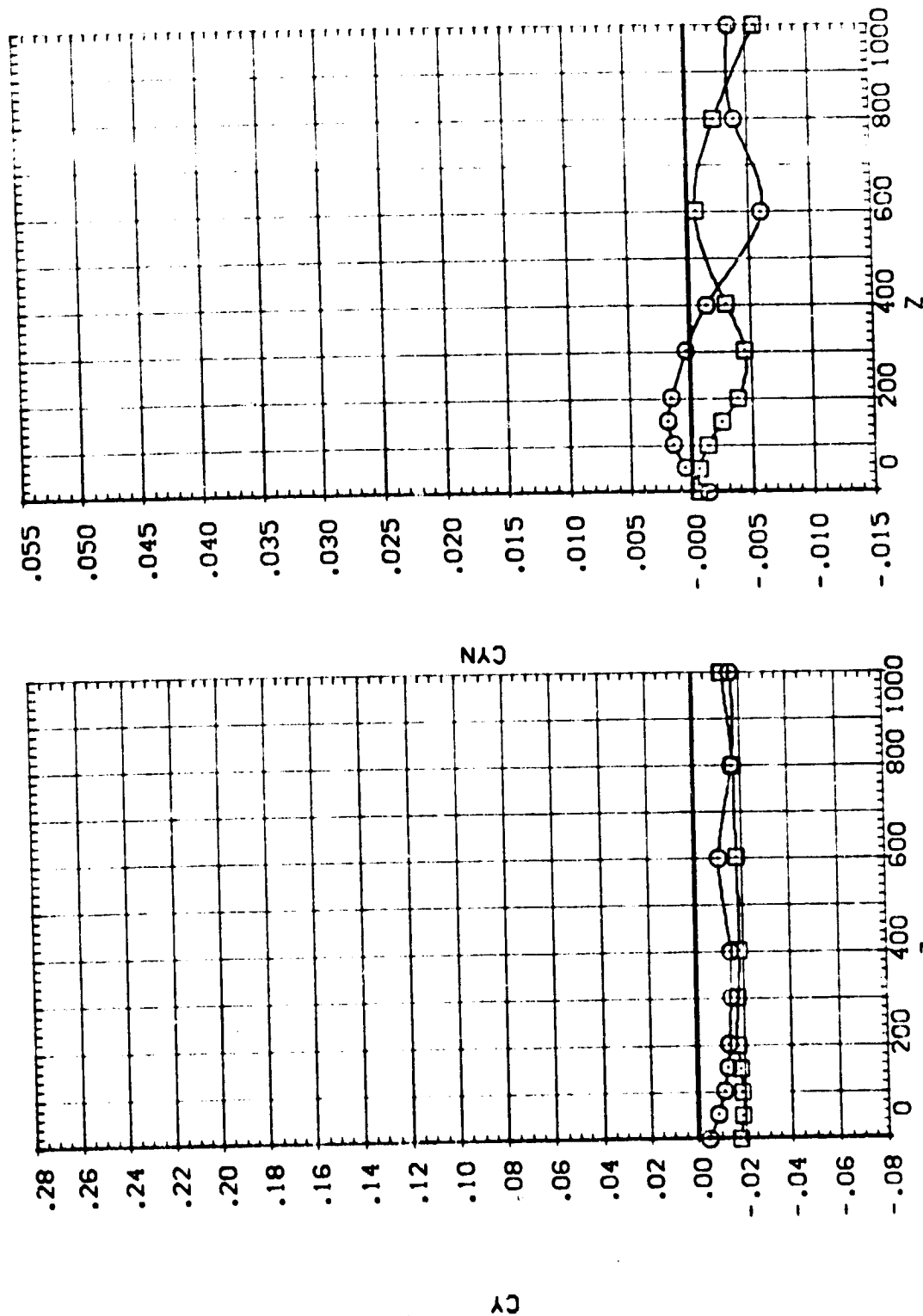
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/C PLUMES SEPARATING FROM 09T10 (RIJ342)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL CASES

SYMBOL X
 O 900.500
 □ 900.500

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA 200.000 DBETA 5.000
 PC-MBR .000

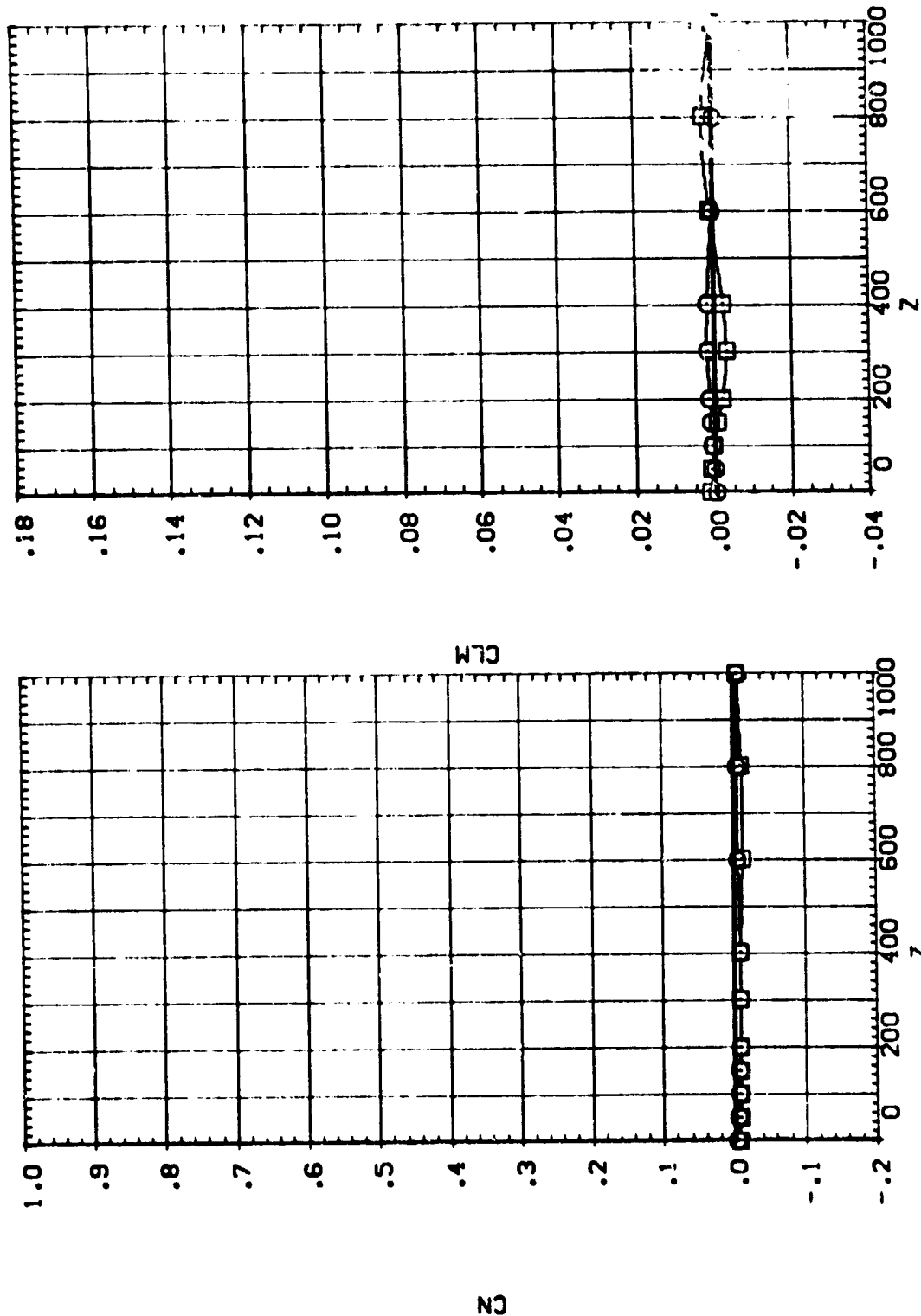


SRB W/C PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ343)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|-------|
| | | MACH | PTOTAL | BETA | DBETA |
| ○ | .117 | 4.530 | 110.000 | .000 | .000 |
| □ | 900.560 | .000 | .000 | 5.000 | .000 |
| | | 400.000 | PO+PR | | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ343)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL
☐ ☐

X
 900.660

MACH
 .117

ALPHA
 .000

DELTA
 .000

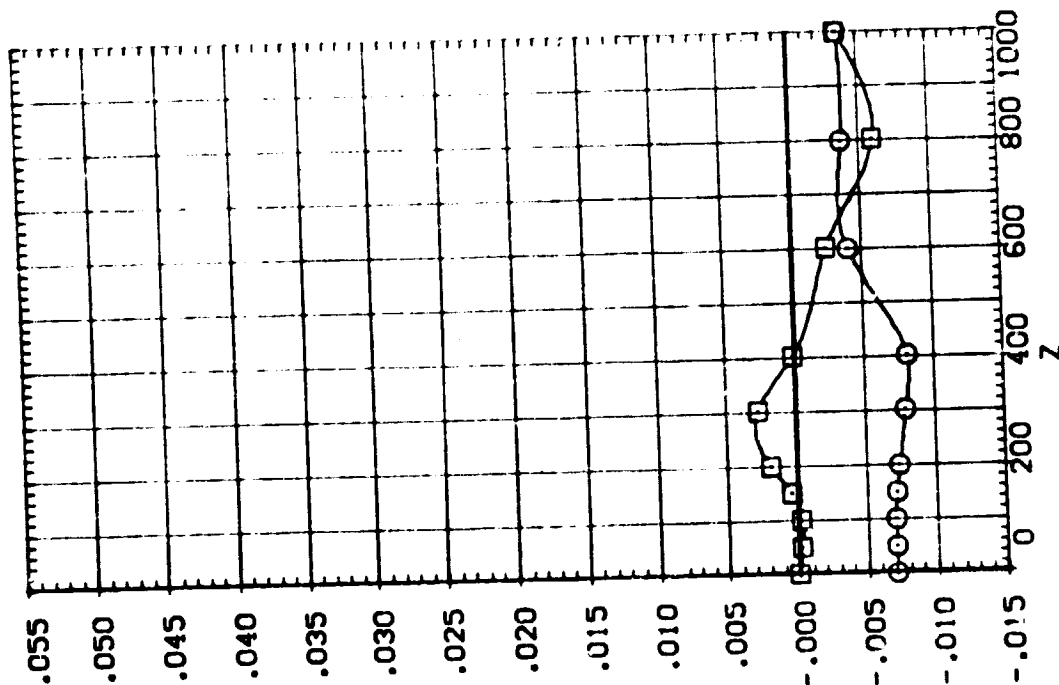
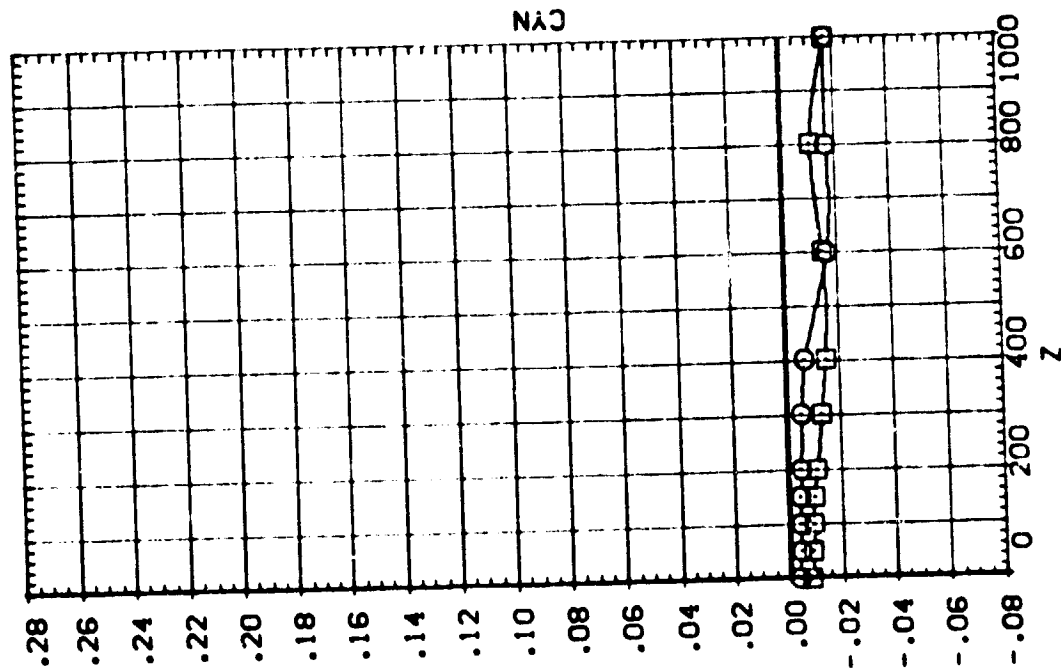
PC+PR
 .000

PARAMETRIC VALUES

4.530
 .000
 .000
 400.000

PIOTAL
 BETA
 DBETA
 PC+PR

110.000
 .000
 5.000
 .000



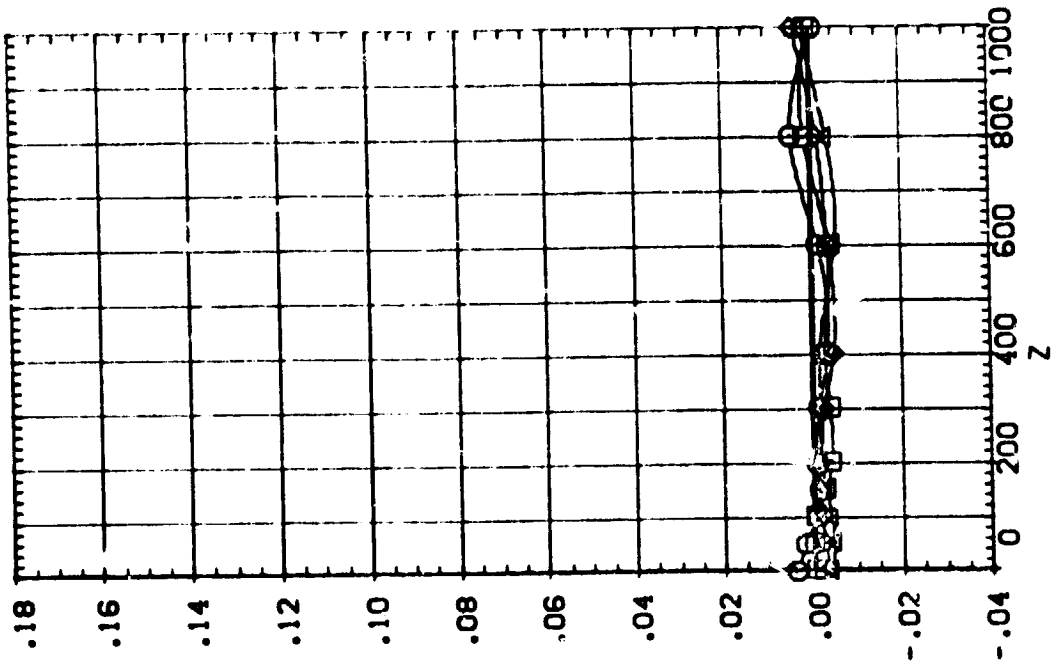
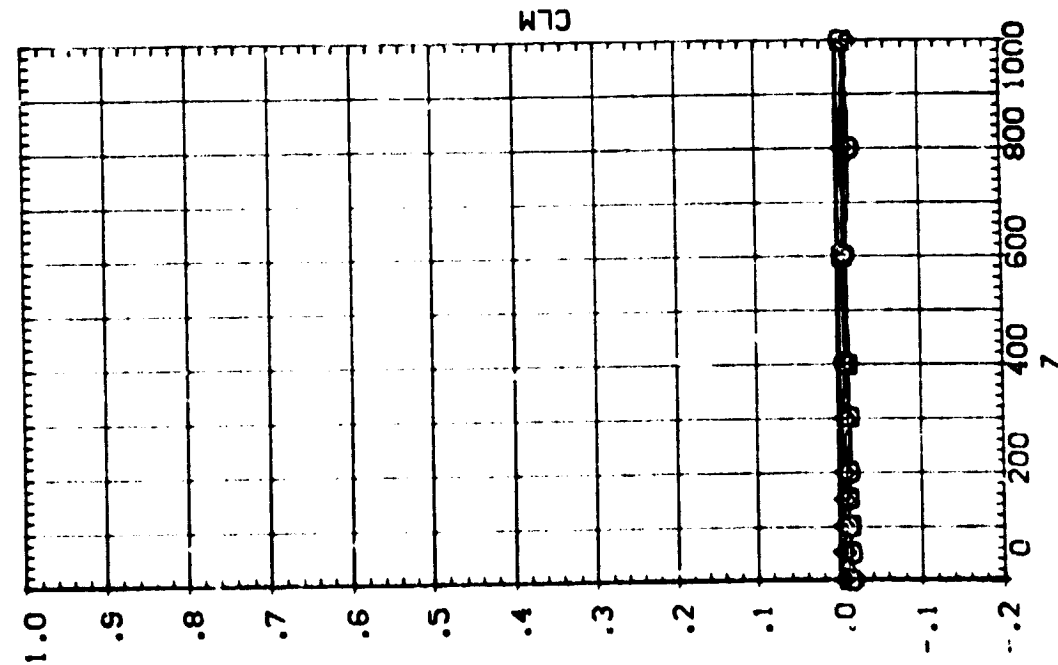
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

3-23

1A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ344)

SEE T.E. ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

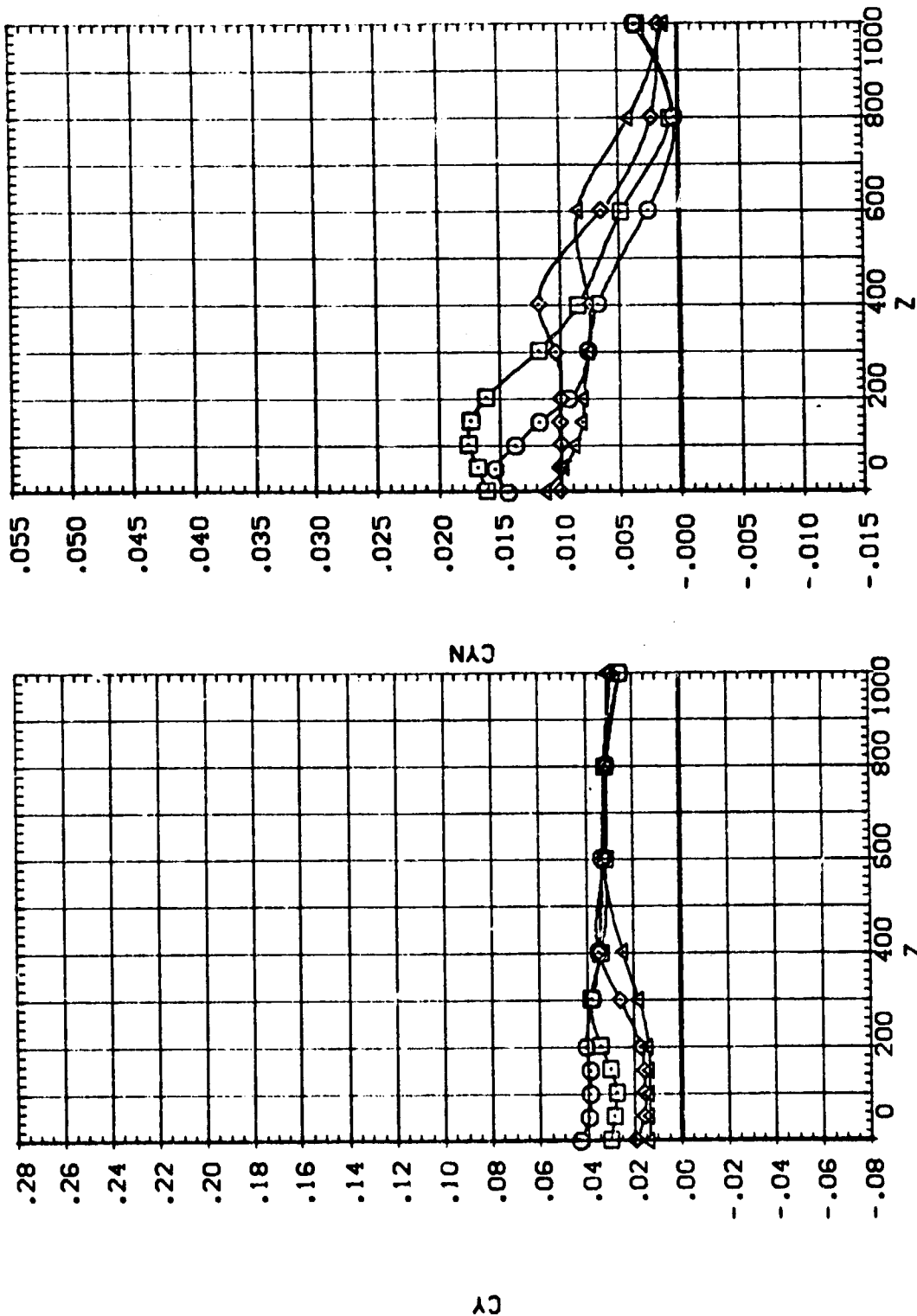
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|----------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.1140 | ALPHA | .000 | BETA | .000 | |
| □ | 600.570 | DALPHA | .000 | DBETA | -5.000 | |
| ◇ | 900.560 | Y | 200.000 | PCWBR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ344)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|-------|
| | | MACH | PTOTAL | BETA | PCF8R |
| ○ | .214 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.140 | .000 | BETA | -5.000 | .000 |
| ◇ | 500.570 | .000 | DBETA | | |
| △ | 900.560 | Y | 200.000 | PCF8R | |

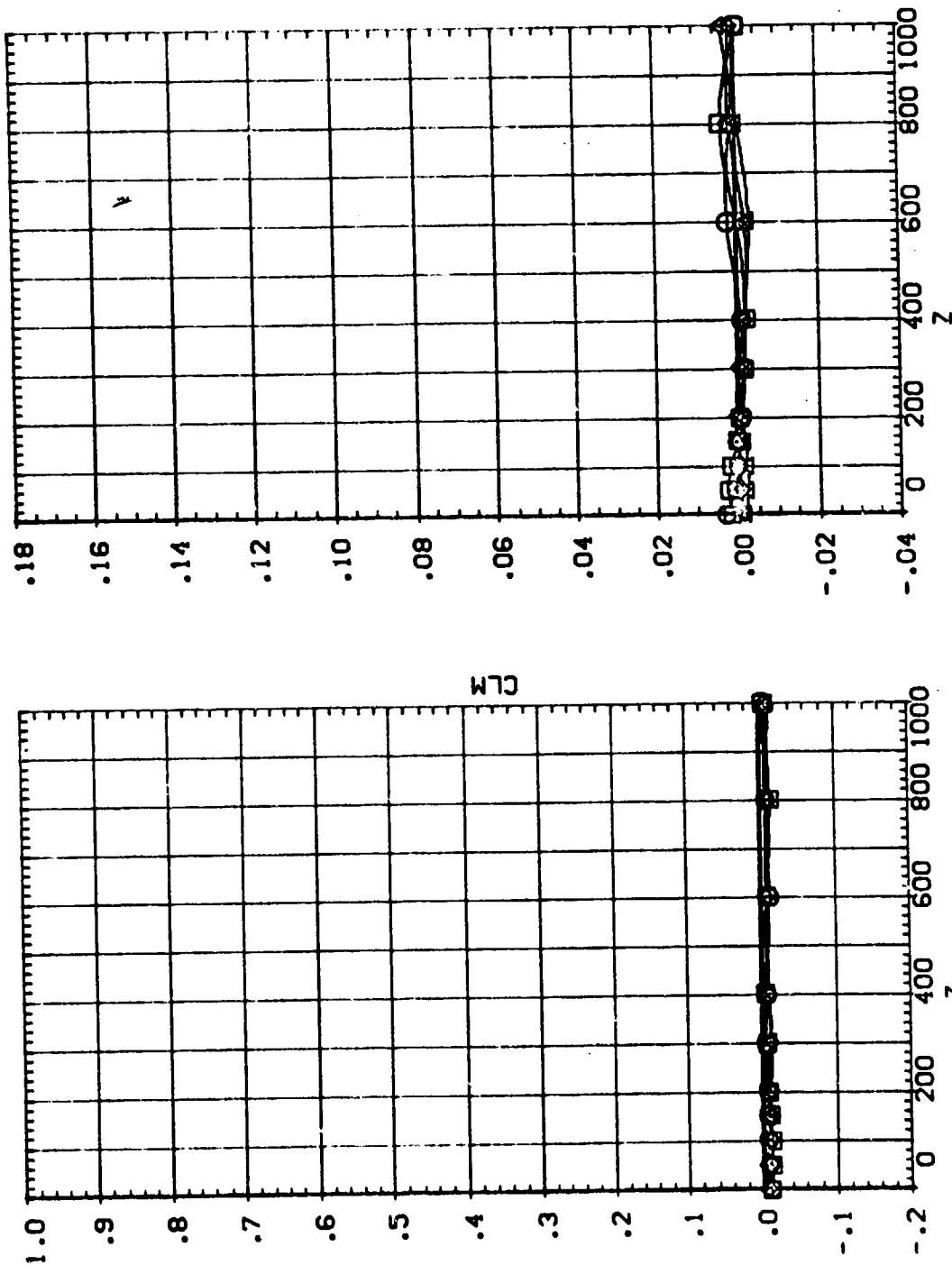


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ345)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

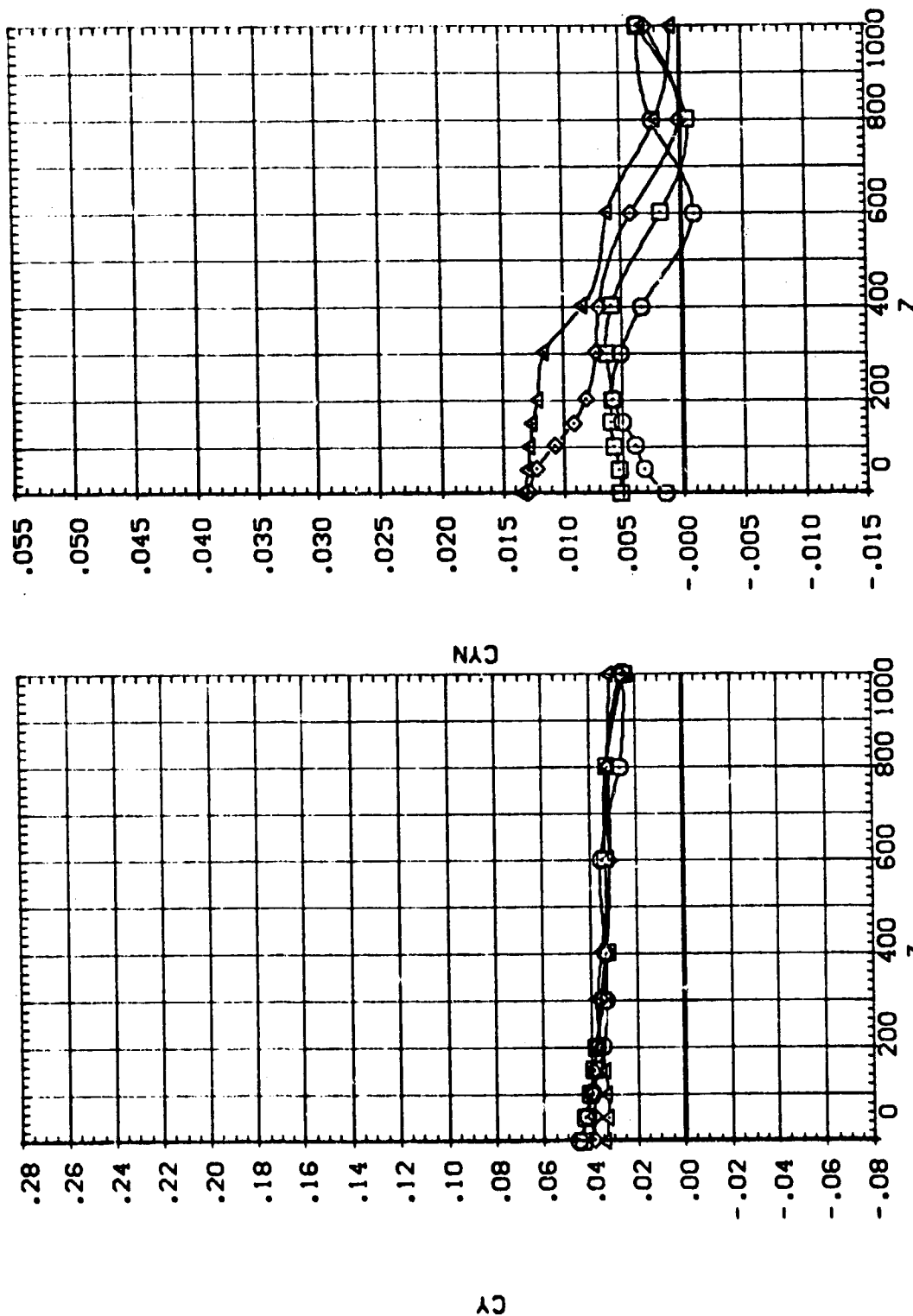
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.460 | ALPHA | .000 | BETA | .000 | |
| □ | 600.620 | DALPHA | .000 | DBETA | -5.000 | |
| ◇ | 900.620 | Y | 400.000 | PC-MBR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ345)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBO | X | PARAMETRIC VALUES | | | |
|---------|--------|-------------------|-------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| 300.460 | ALPHA | .000 | BETA | .000 | .000 |
| 600.620 | DALPHA | .000 | DBETA | -5.000 | .000 |
| 900.620 | Y | 400.000 | PC468 | | |

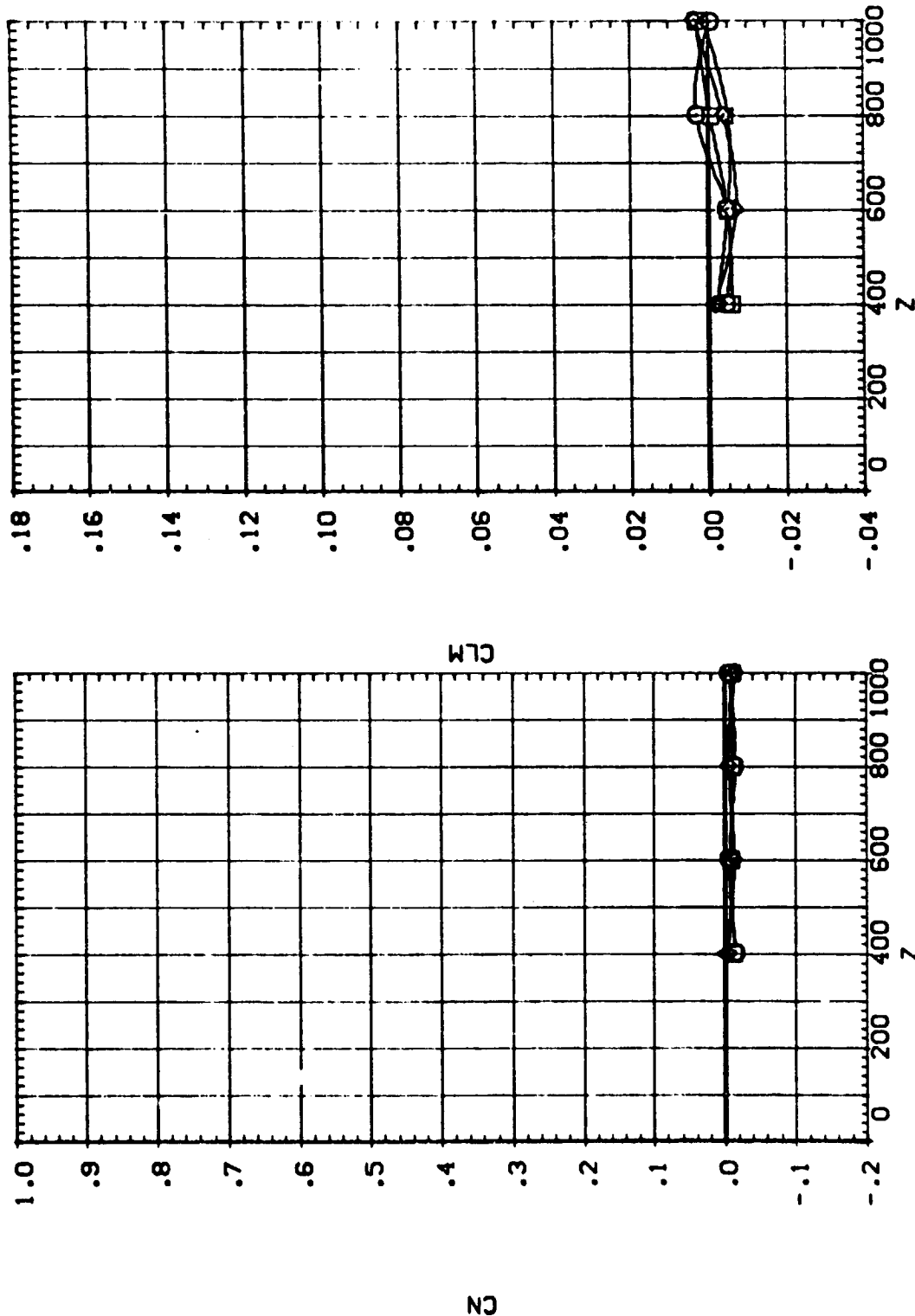


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1.13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ346)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|--------|---------|--|
| | | MACH | 4.530 | POTIAL | 110.000 | |
| ○ | 300.180 | ALPHA | .000 | BETA | .000 | |
| □ | 600.310 | DALPHA | .000 | DBETA | -5.000 | |
| ◇ | 900.550 | Y | .000 | PC-MBR | .000 | |

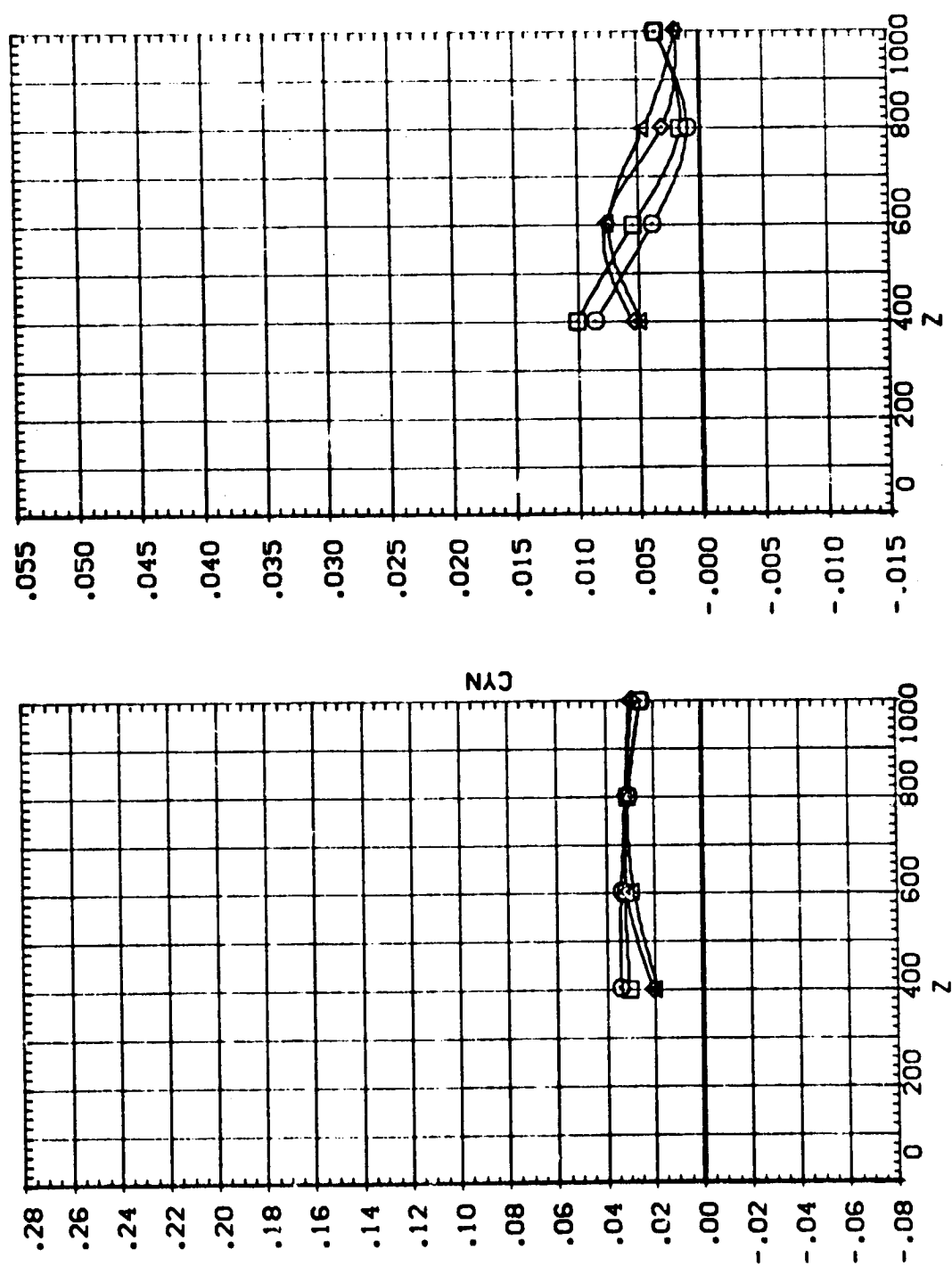


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ346)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| X | PARAMETRIC VALUES | | | | |
|---------|-------------------|--------|---------|--------|--|
| | MAOH | PTOTAL | 110.000 | | |
| 300.480 | ALPHA | .000 | BETA | .000 | |
| 600.310 | DALPHA | .000 | DBETA | -5.000 | |
| 900.550 | Y | .000 | PC-MBR | .000 | |

SYMBOL
 ○
 □
 ◇
 △

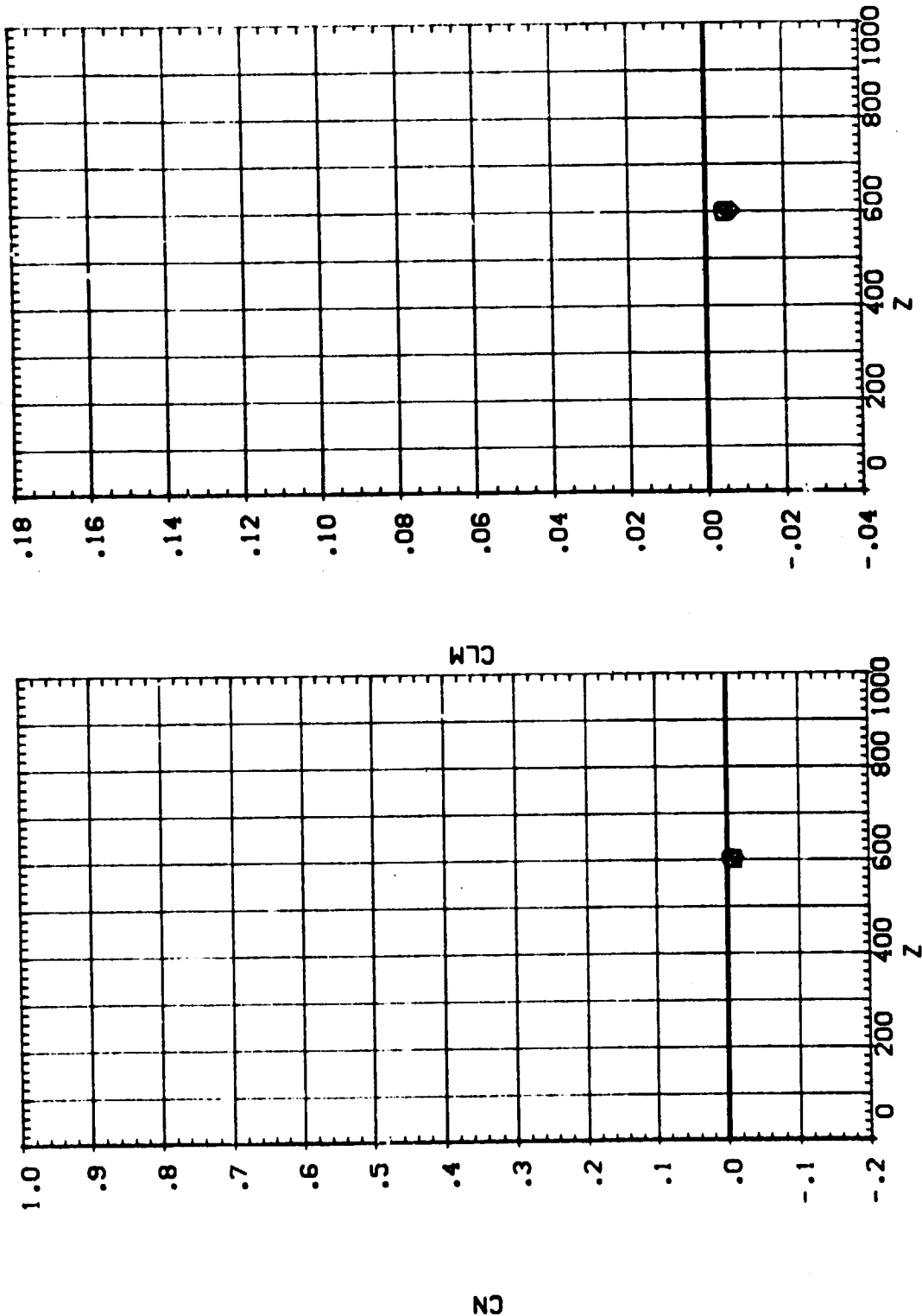


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ347)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

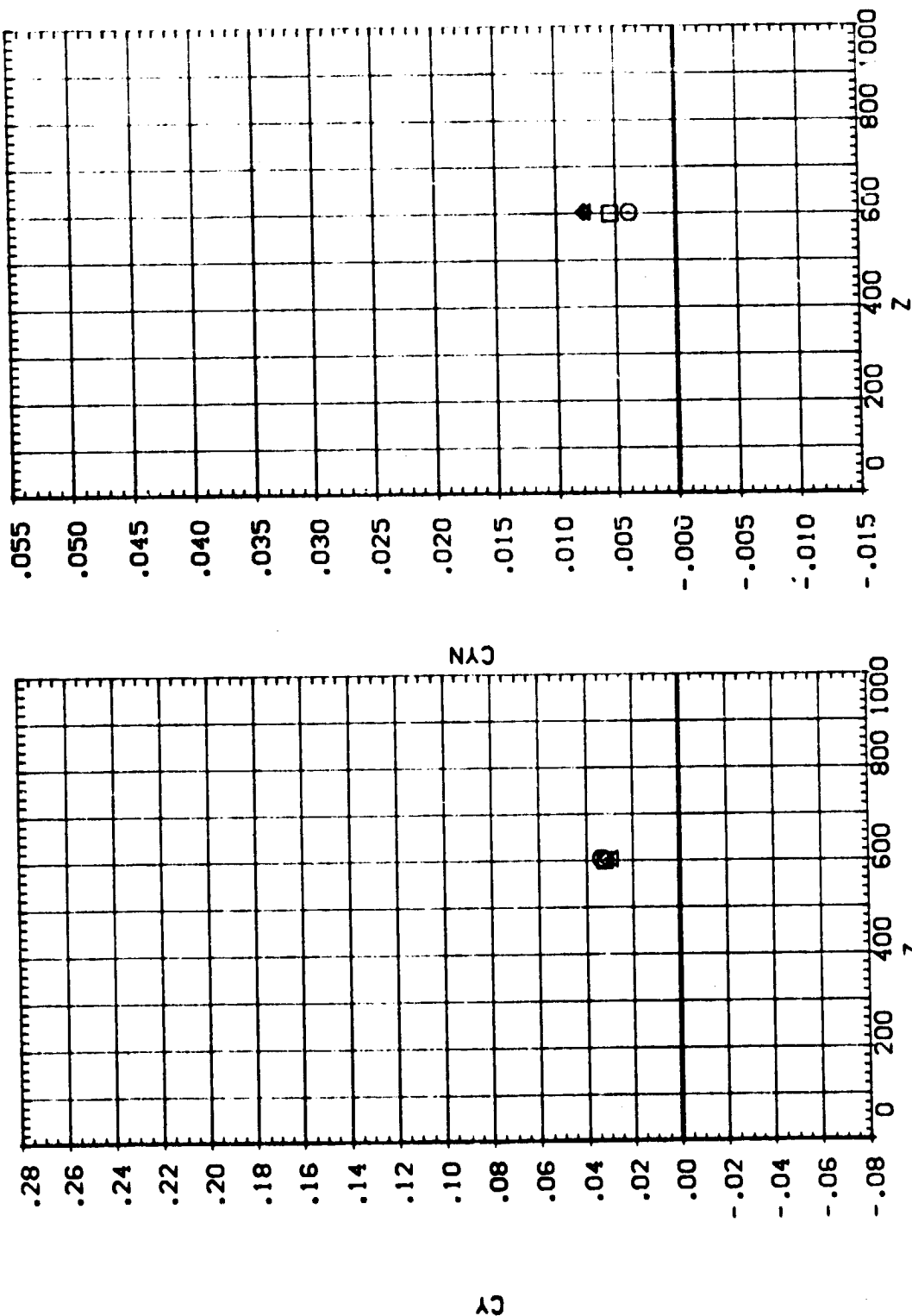
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | PITOT | 110.000 | |
| ○ | 300.420 | ALPHA | .000 | BETA | .000 | |
| □ | 600.600 | DALPHA | .000 | DBETA | -5.000 | |
| ◇ | 900.850 | Y | 800.000 | PC-HSR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ347)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|--------|--------|
| | | MACH | PTOTAL | BETA | DBETA | PC-MBR |
| ○ | .392 | 4.530 | 110.000 | .000 | -5.000 | .000 |
| □ | 300.420 | .000 | .000 | .000 | .000 | .000 |
| ◇ | 600.600 | .000 | .000 | .000 | .000 | .000 |
| △ | 900.650 | .000 | .000 | .000 | .000 | .000 |

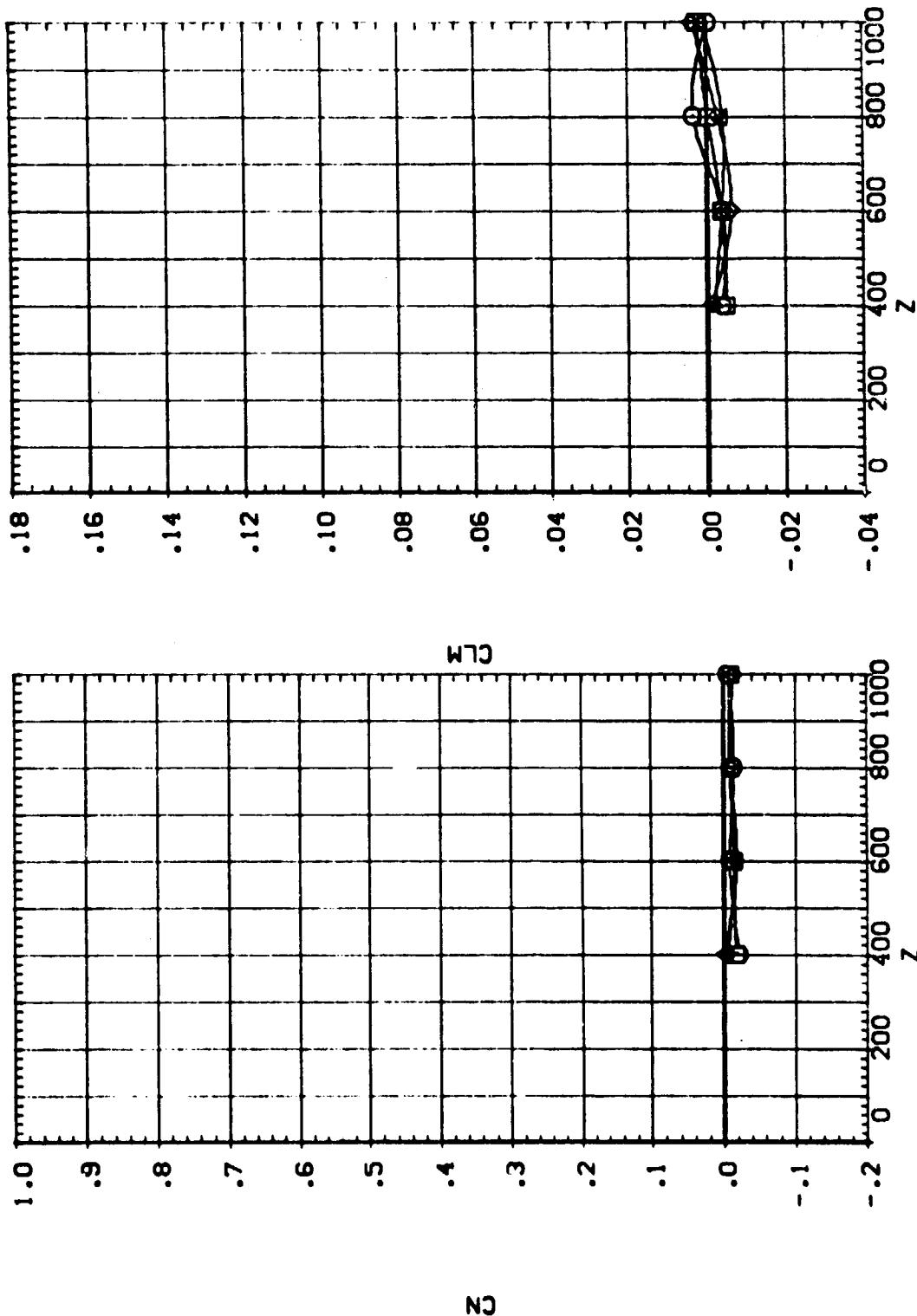


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ348)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

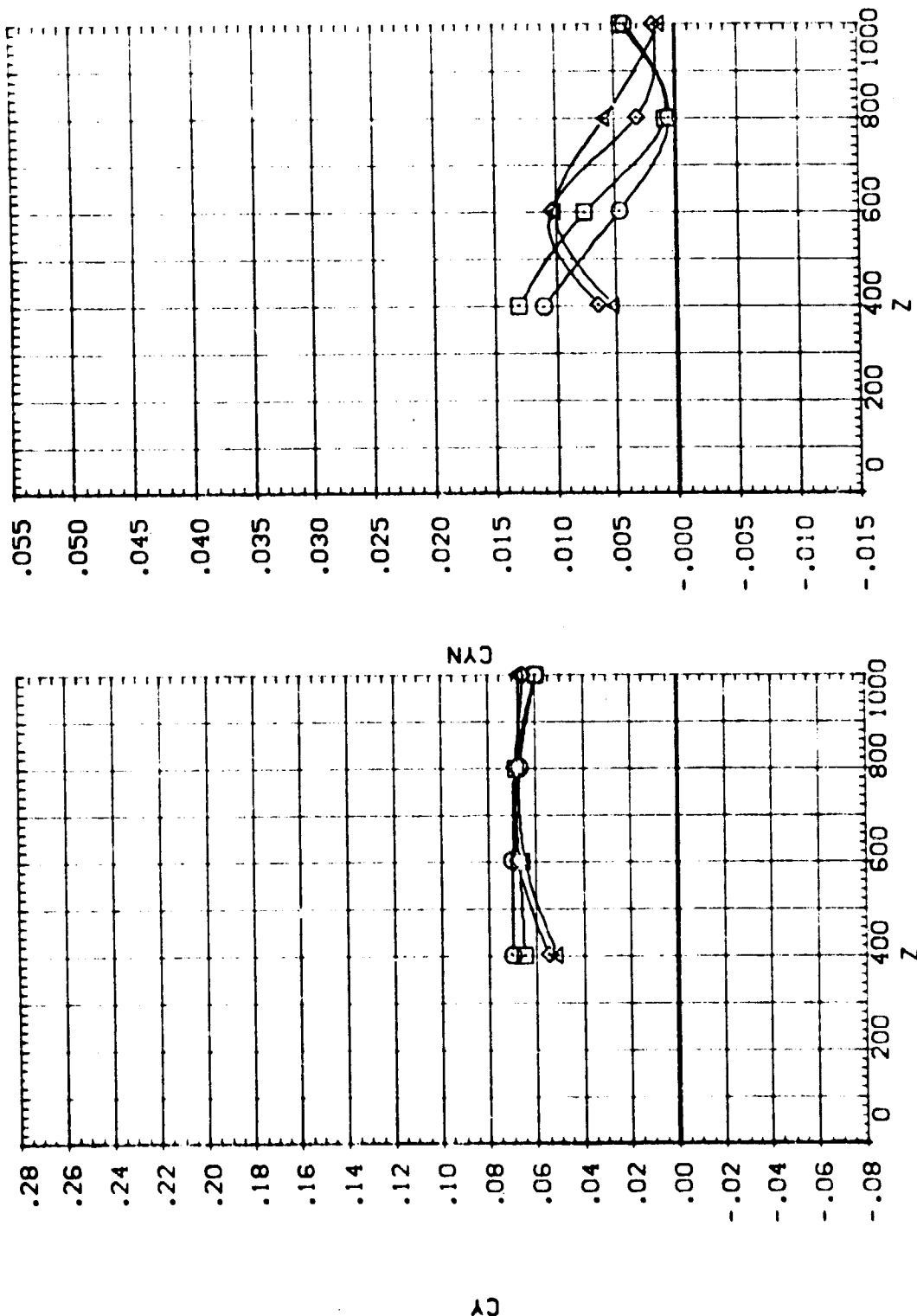
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|--------|
| | | MACH | P/TOTAL | BETA | PC-MBR |
| ○ | .226 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.210 | .000 | BETA | -10.000 | .000 |
| ◇ | 600.560 | .000 | DBETA | | |
| △ | 900.440 | .000 | PC-MBR | | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ348)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | 300.210 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.560 | DALPHA | .000 | DBETA | -10.000 |
| △ | 900.140 | Y | .000 | PCHEER | .000 |

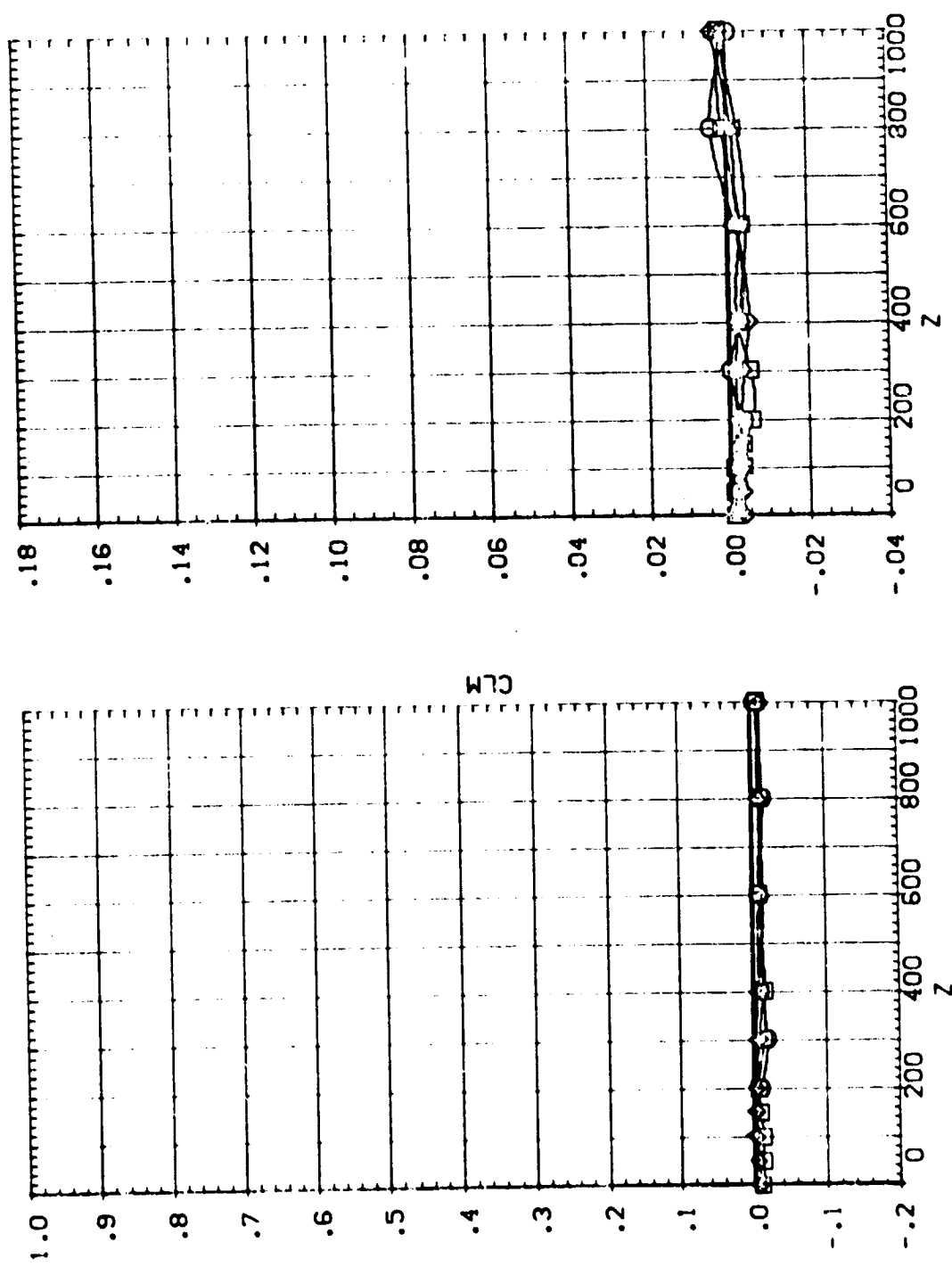


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/EI

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ349)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|---------|
| | | MACH | 4.530 | P/DOTAL | 110.000 |
| ○ | 300.370 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.600 | DALPHA | .000 | DBETA | -10.000 |
| △ | 900.820 | Y | 200.000 | PC+PR | .000 |

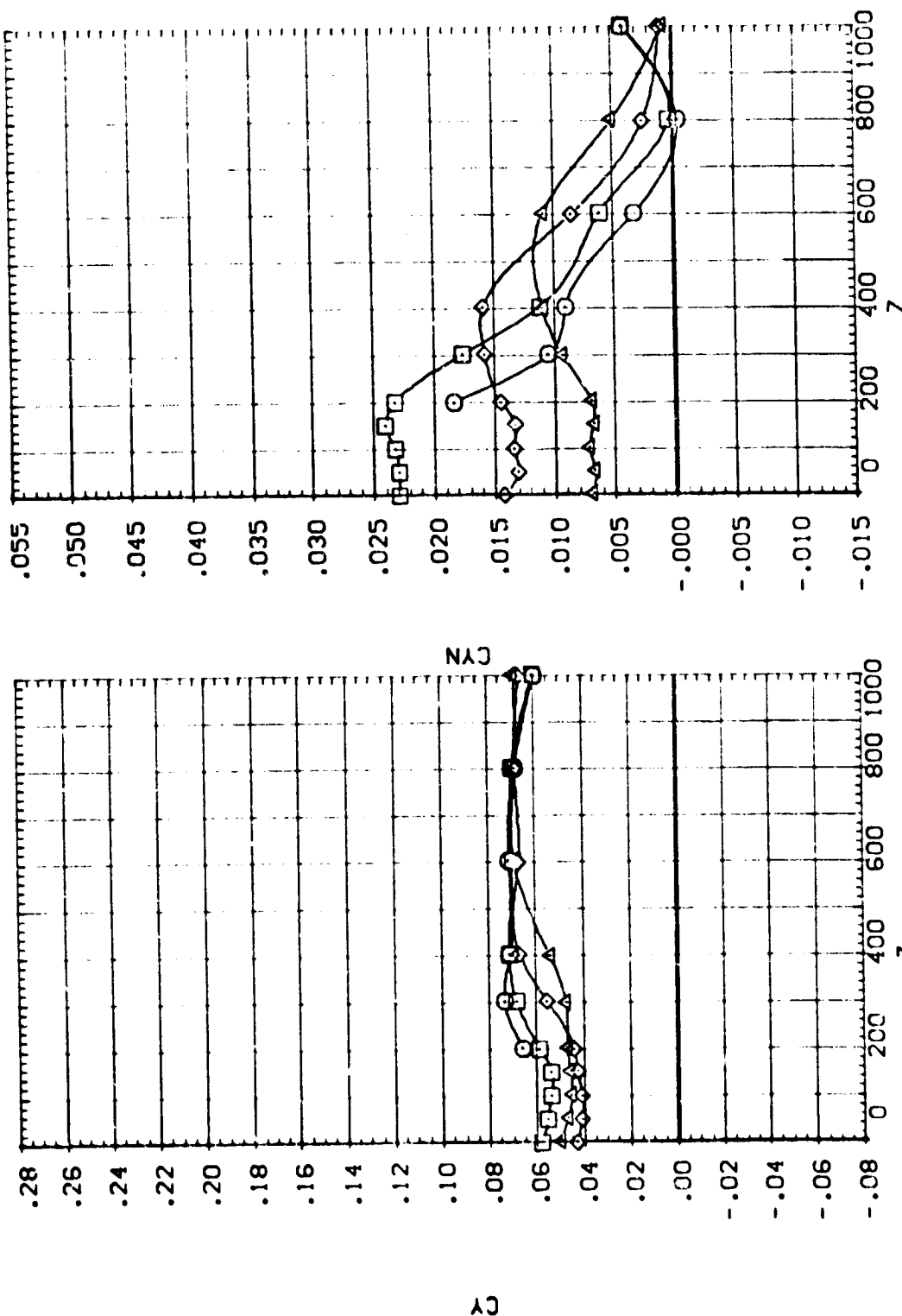


1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ349)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| X | PARAMETRIC VALUES | | | |
|---------|-------------------|---------|---------|---------|
| | MACH | 4.530 | P/TOTAL | 110.000 |
| 300.370 | ALPHA | .000 | BETA | .000 |
| 600.800 | DALPHA | .000 | DBETA | -10.000 |
| 900.820 | Y | 200.000 | PC-HSR | .000 |

SYMBOL
 ○
 □
 ◇
 △



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

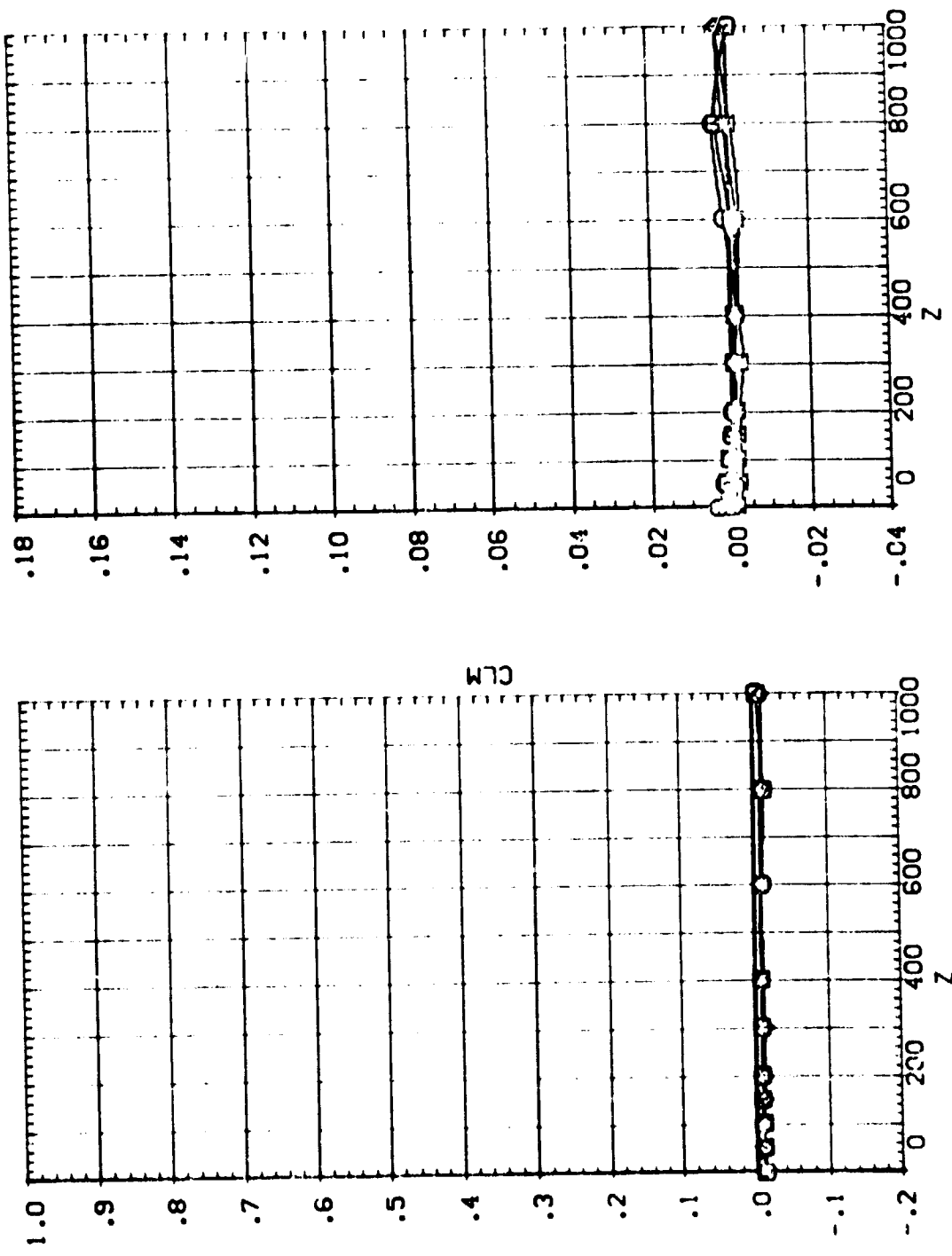
IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ350)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL

| PARAMETRIC VALUES | |
|-------------------|---------|
| □ | 4.530 |
| ◇ | PTOTAL |
| △ | BETA |
| | DBETA |
| | PC-MER |
| | 110.000 |
| | .000 |
| | -10.000 |
| | .000 |

1/6 MACH
 390.270 ALPHA
 600.500 DALPHA
 900.460 Y

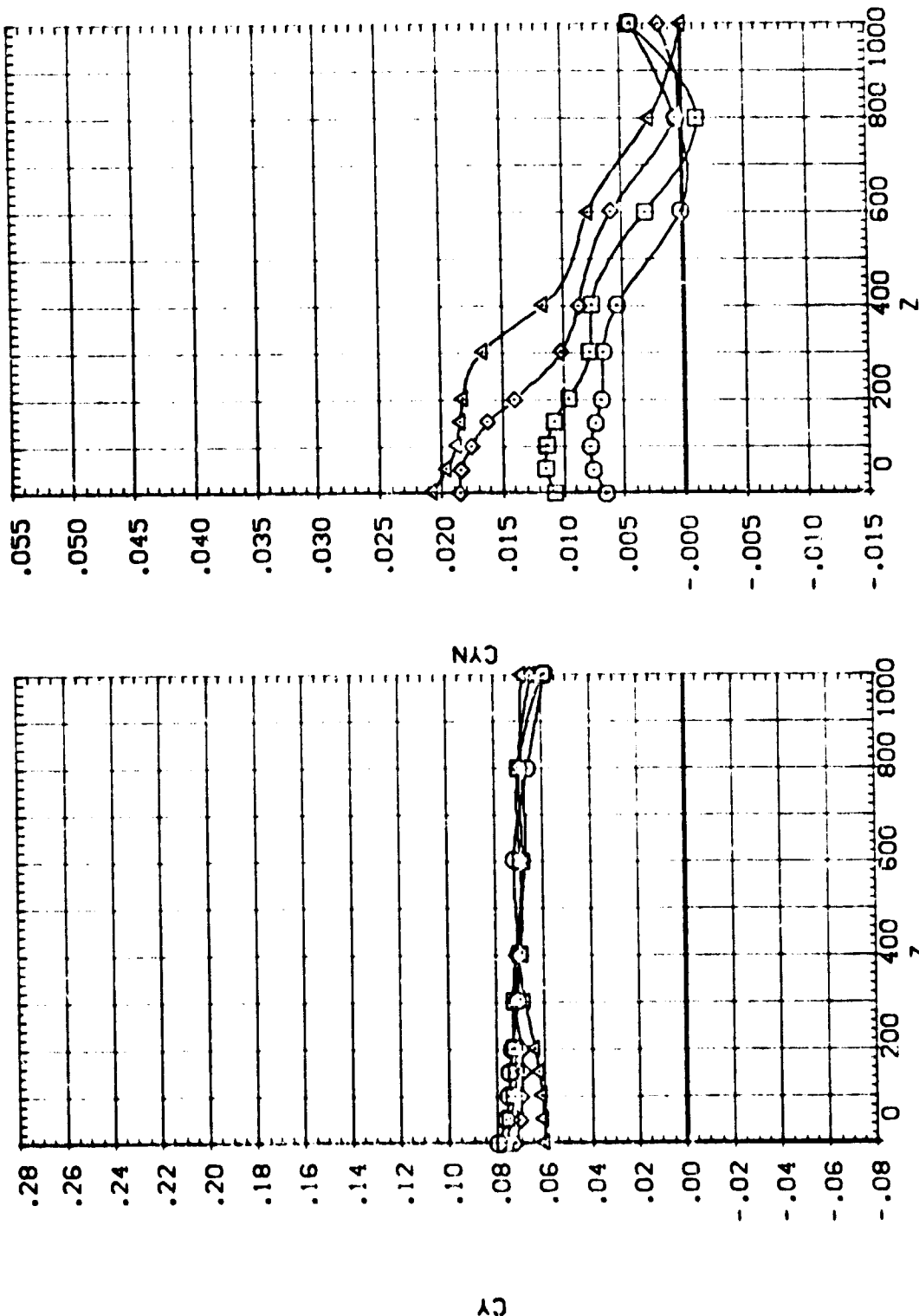


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ350)

SYMBOL
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA .000 DBETA -10.000
 Y 400.000 PC-HPR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

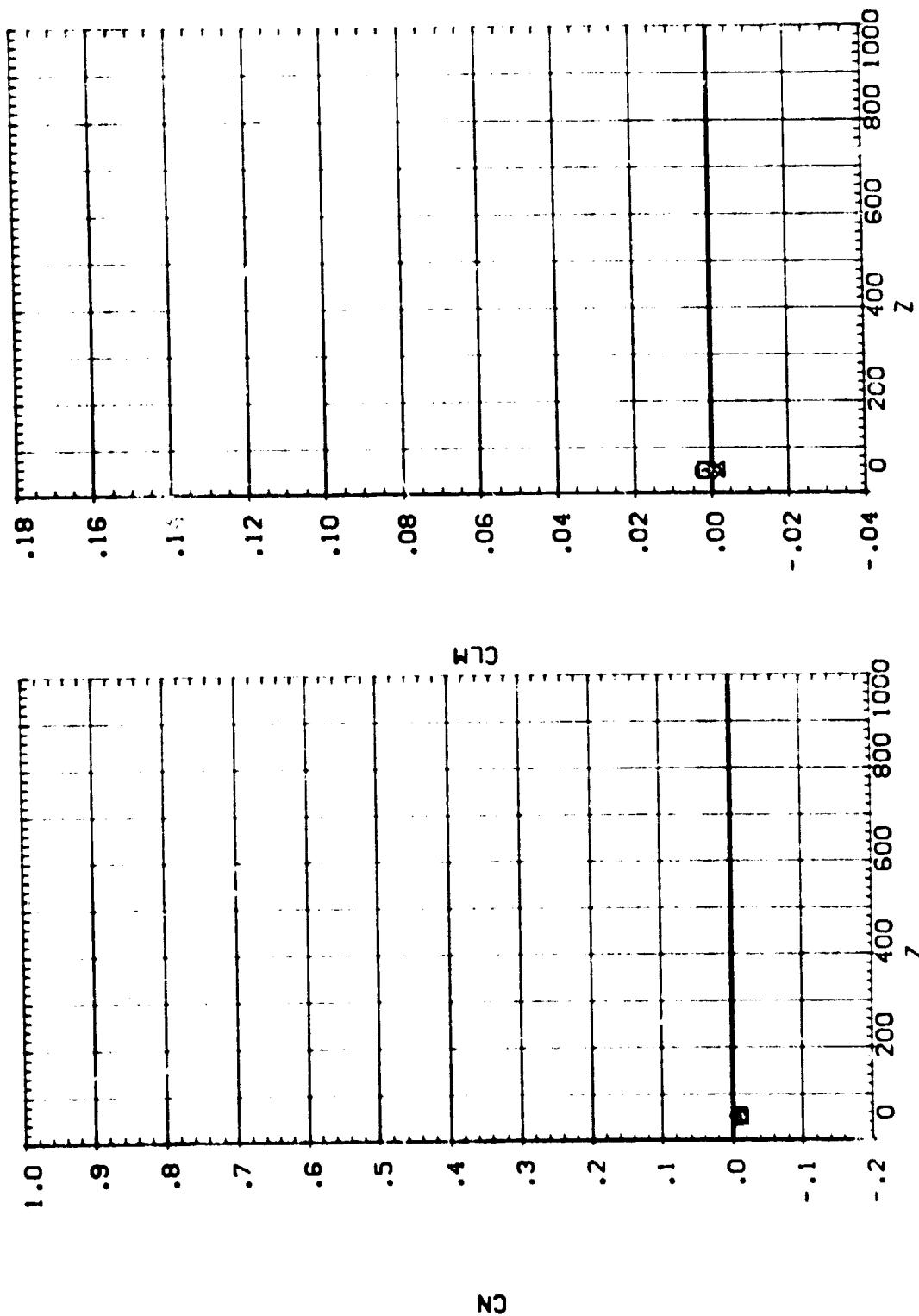


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ351)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|-------|---------------------|
| ○ | .272 | 4.530 | PIDIAL 110.000 |
| □ | 300.310 | .000 | BETA .000 |
| ◇ | 600.490 | .000 | DBETA -10.000 |
| △ | 900.580 | Y | 800.000 PC-MBR .000 |

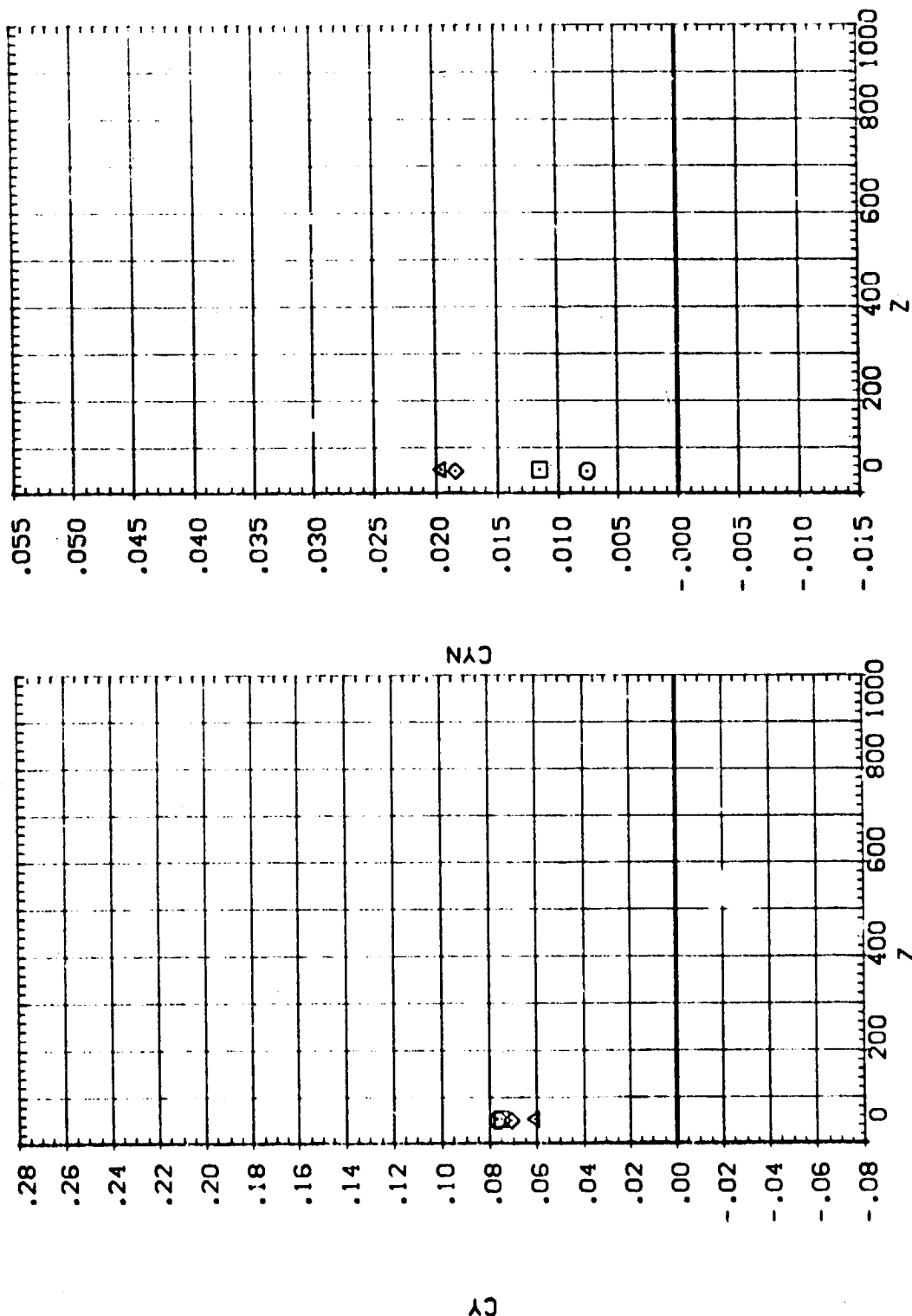


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ351)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL x .272 MACH 4.530 PTOTAL 110.000
 300.31G ALPHA .000 BETA .000
 600.450 DIALPHA .000 DBETA -10.000
 900.580 Y 800.000 PCMPBR .000

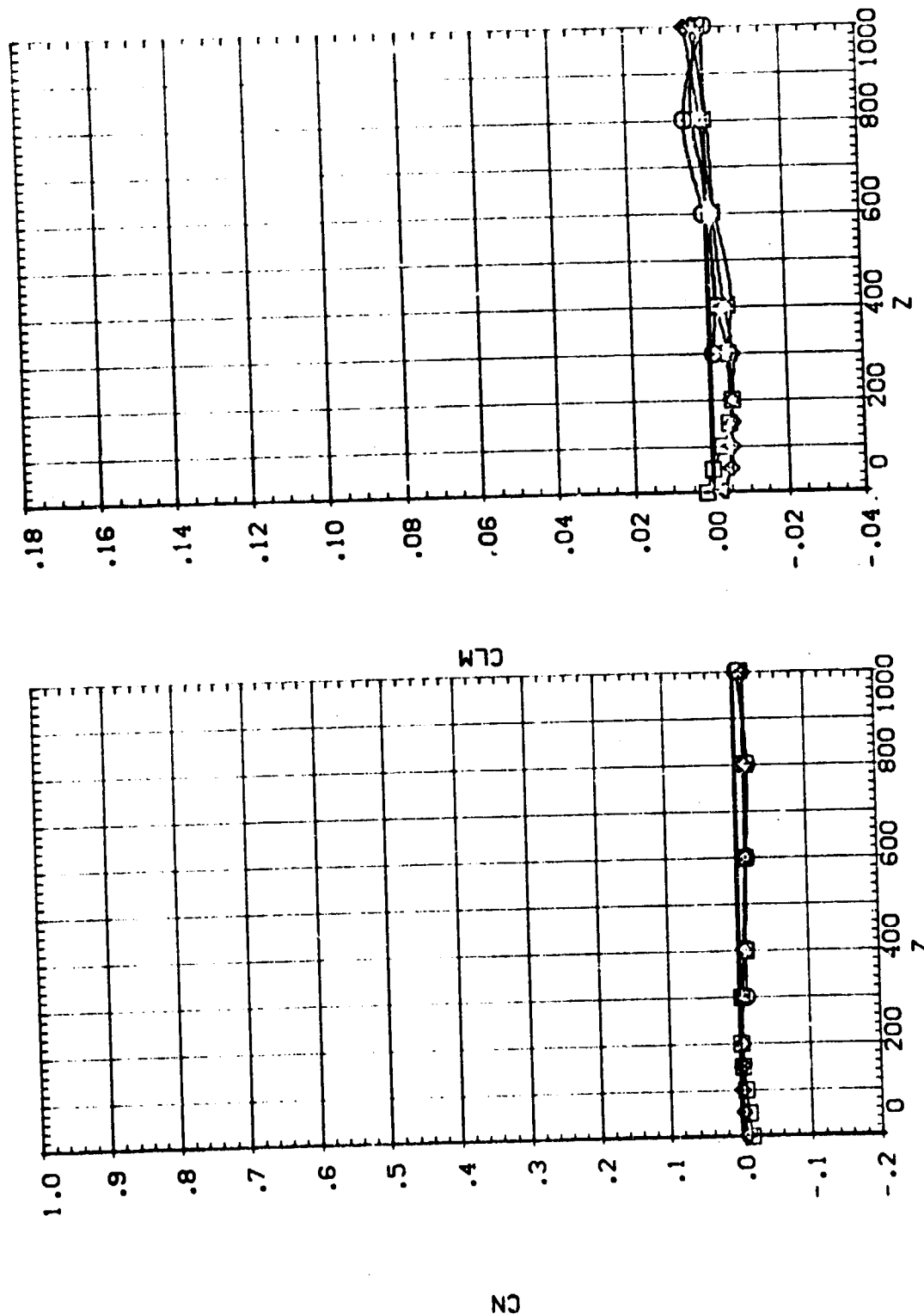


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ353)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

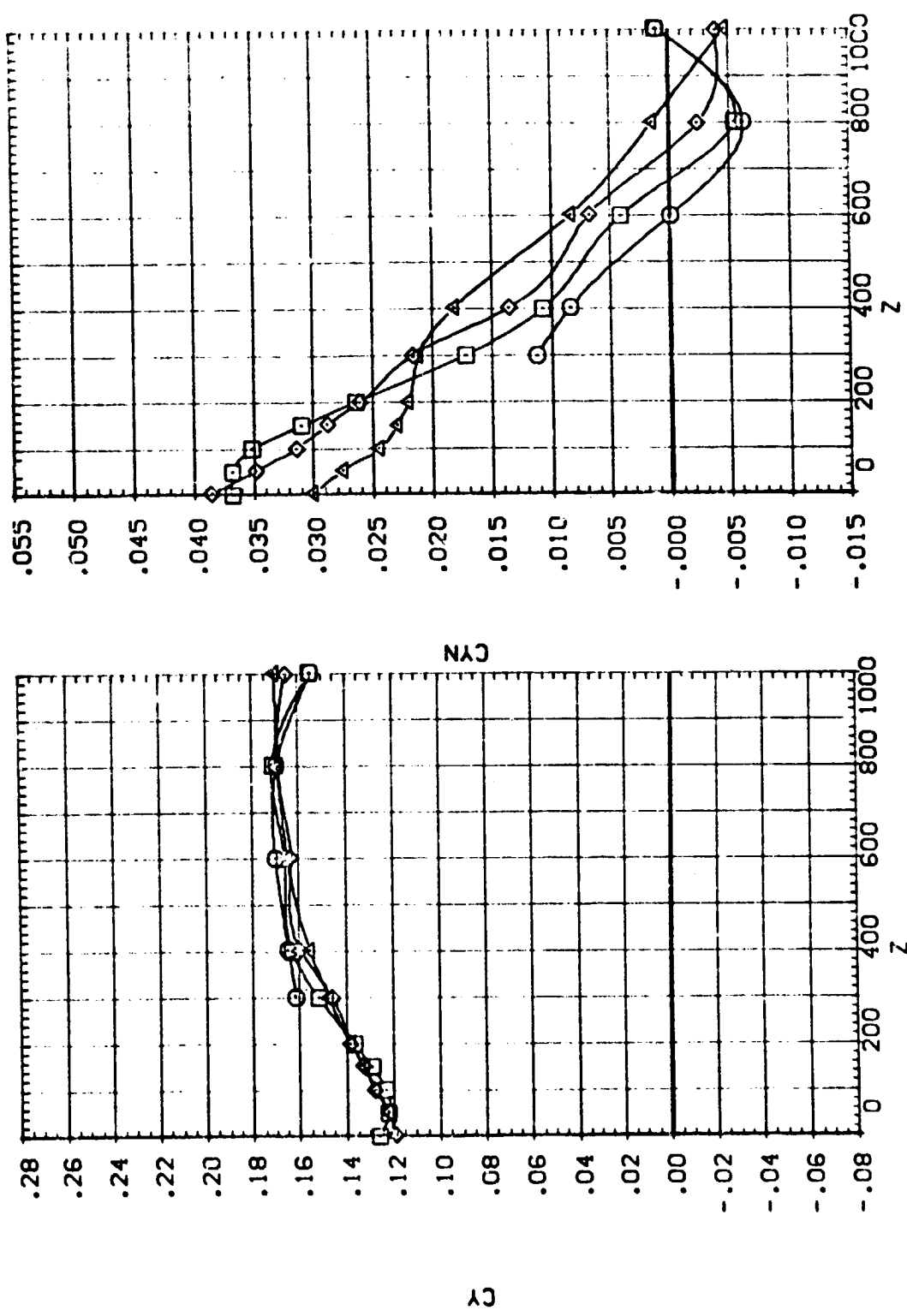
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.550 | ALPHA | .000 | BETA | .000 | |
| □ | 600.160 | DALPHA | .000 | DBETA | -20.000 | |
| ◇ | 900.600 | Y | 400.000 | PC-HBR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ353)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PIOTAL | PIOTAL |
|--------|---------|------|---------|---------|
| ○ | 300.550 | .097 | 4.530 | 110.000 |
| □ | 600.160 | .000 | .000 | .000 |
| ◇ | 900.600 | .000 | .000 | -20.000 |
| △ | | Y | 400.000 | PC+R |

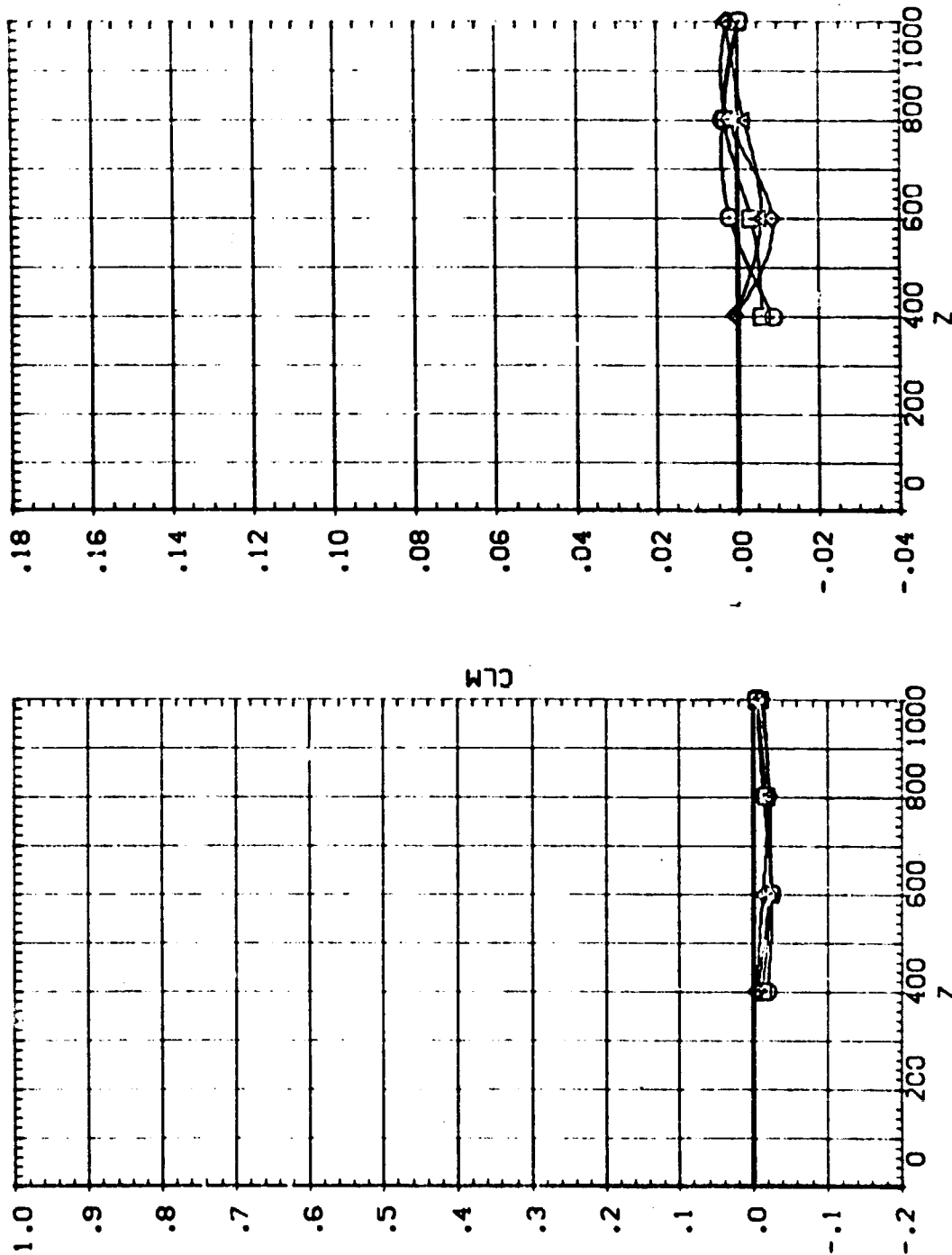


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ354)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

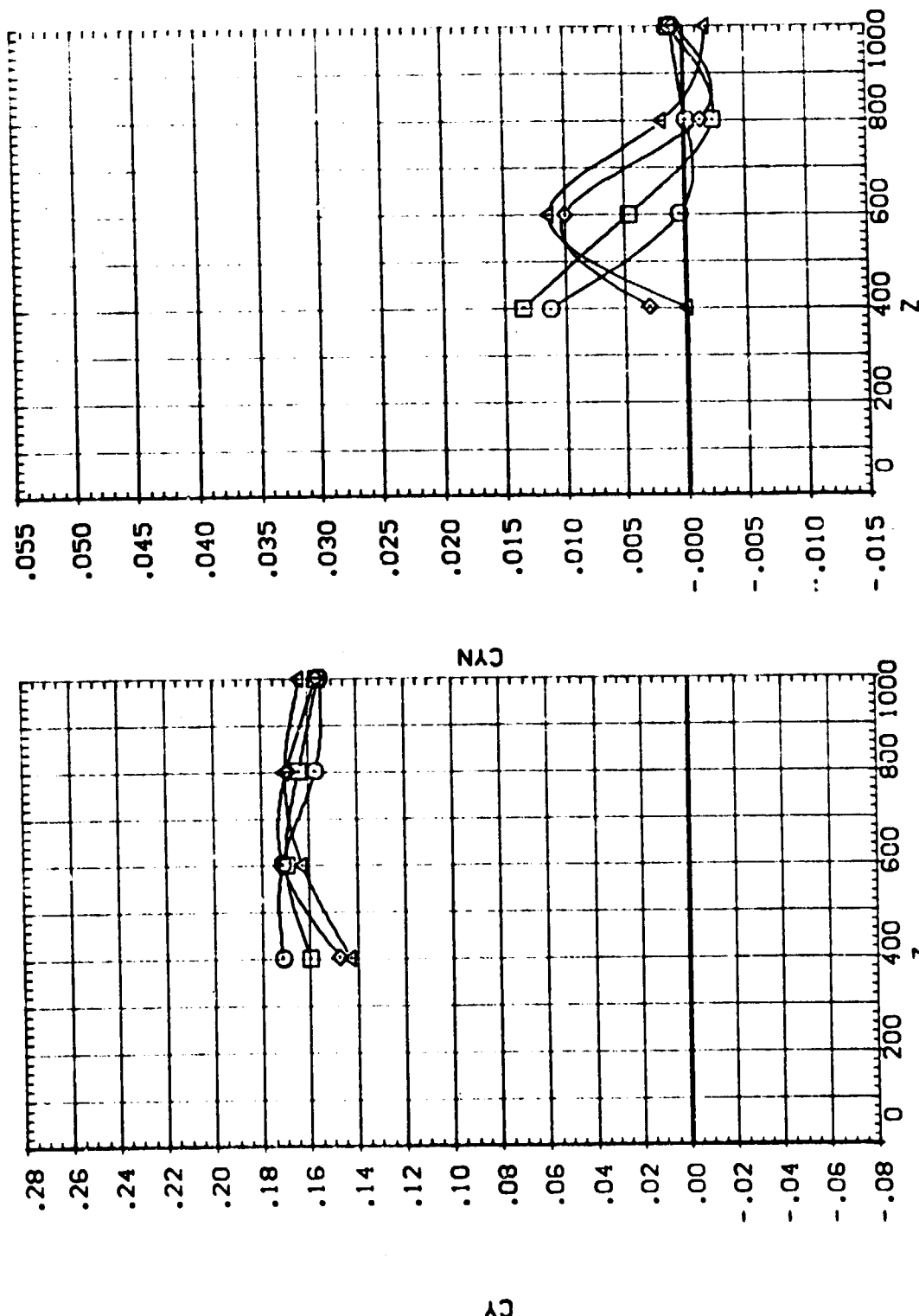
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|--------|---------|--|
| | | MACH | 4.530 | PTOTAL | 110.000 | |
| ○ | 299.780 | ALPHA | .000 | BETA | .000 | |
| □ | 600.620 | DALPHA | .000 | DBETA | -20.000 | |
| ◇ | 899.990 | Y | .000 | PCMBR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ354)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X PARAMETRIC VALUES
 ○ .145 MACH 4.530 PTOTAL 110.000
 □ 299.780 ALPHA .000 BETA .000
 ◇ 600.620 DALPHA .000 DBETA -20.000
 △ 899.990 Y .000 PC-MER

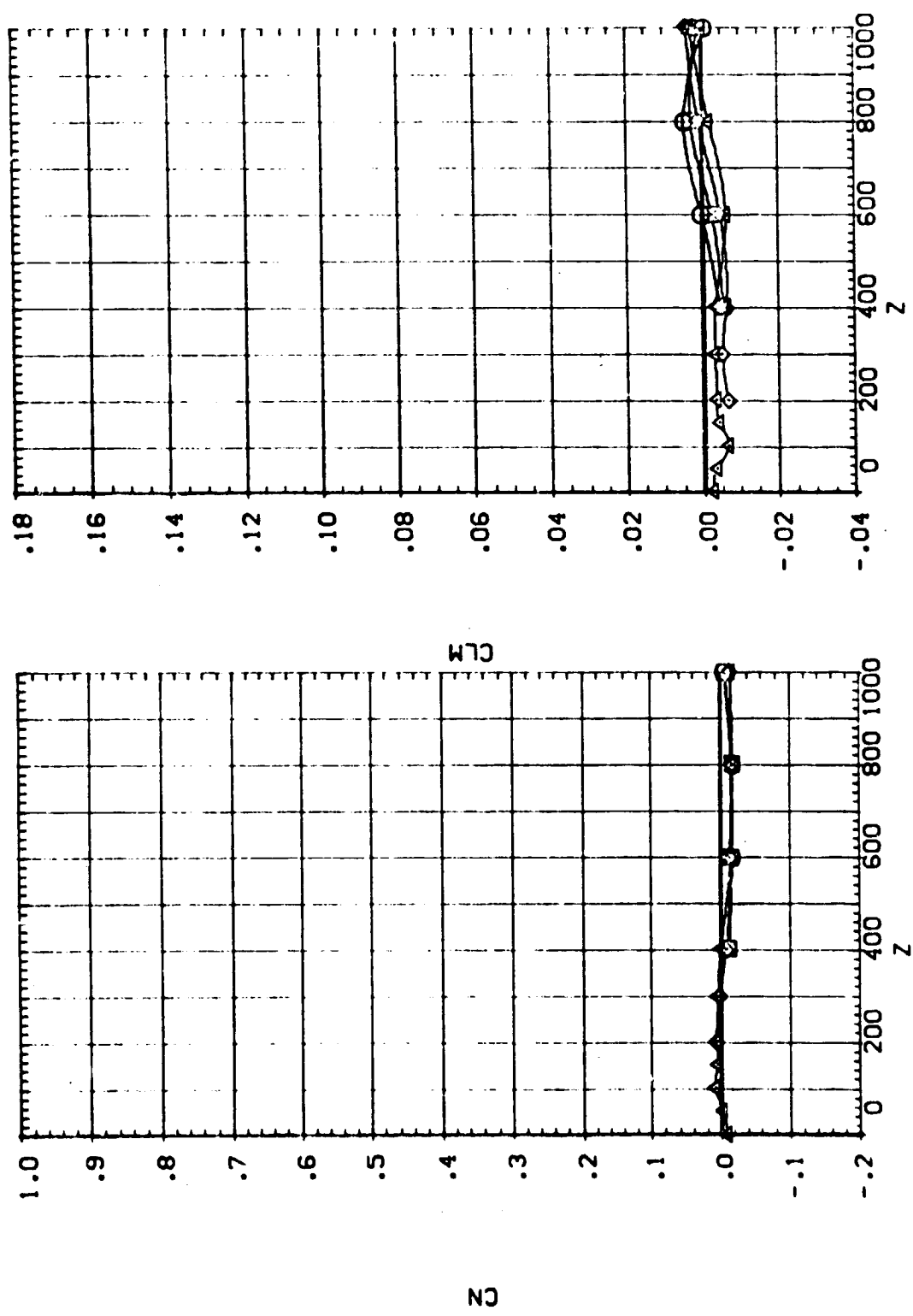


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ355)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

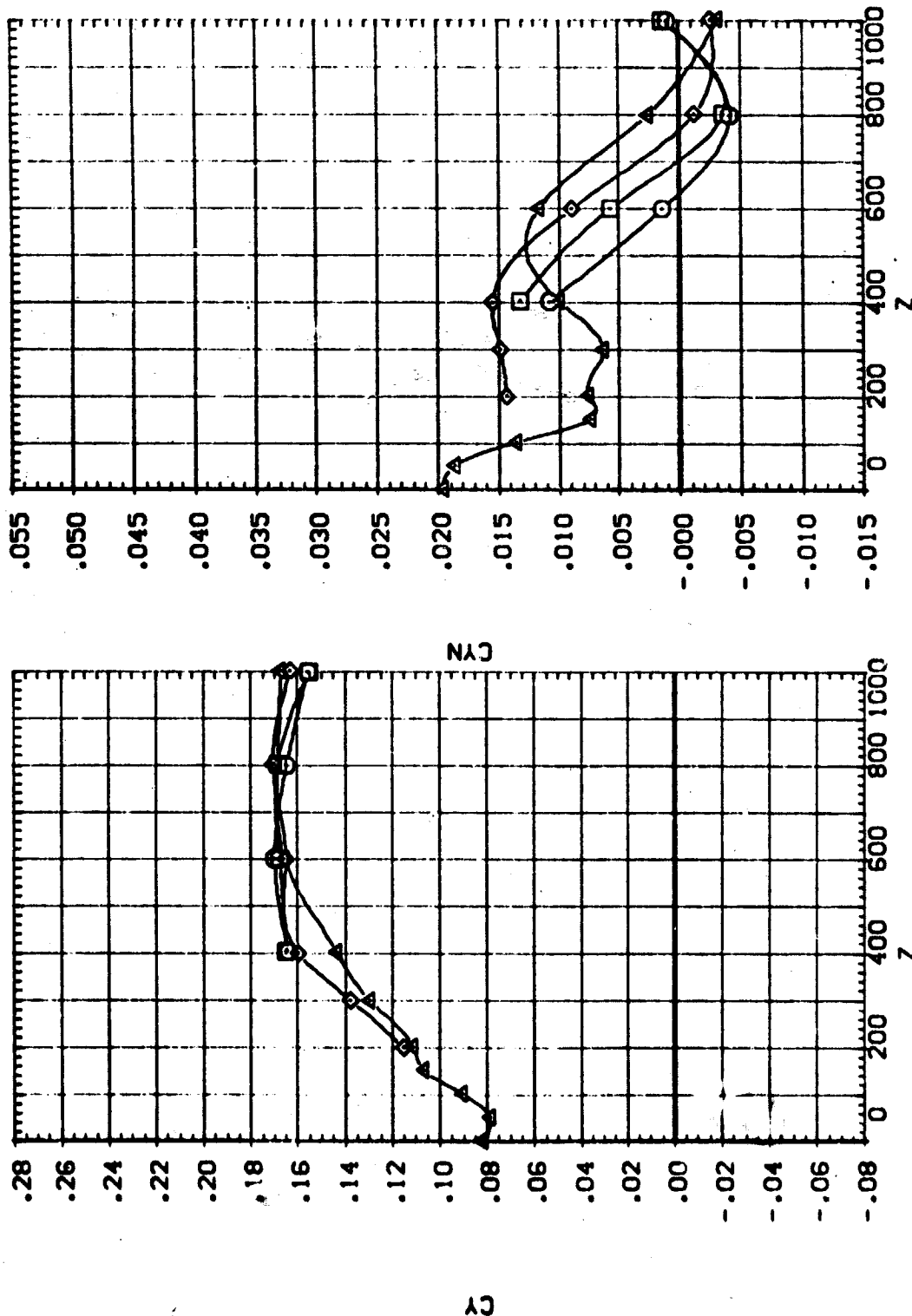
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.910 | ALPHA | .000 | BETA | .000 | |
| □ | 600.640 | DALPHA | .000 | DBETA | -20.000 | |
| ◇ | 900.760 | Y | 200.000 | PCMBR | .000 | |



1A13 SR8(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ355)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|-------|-------|
| | | MACH | PIOTAL | BETA | DBETA | PC+PR |
| ○ | 300.910 | .049 | 4.530 | .000 | .000 | .000 |
| □ | 600.840 | .049 | .000 | .000 | .000 | .000 |
| ◇ | 900.760 | .049 | .000 | .000 | .000 | .000 |
| △ | | | 200.000 | .000 | .000 | .000 |

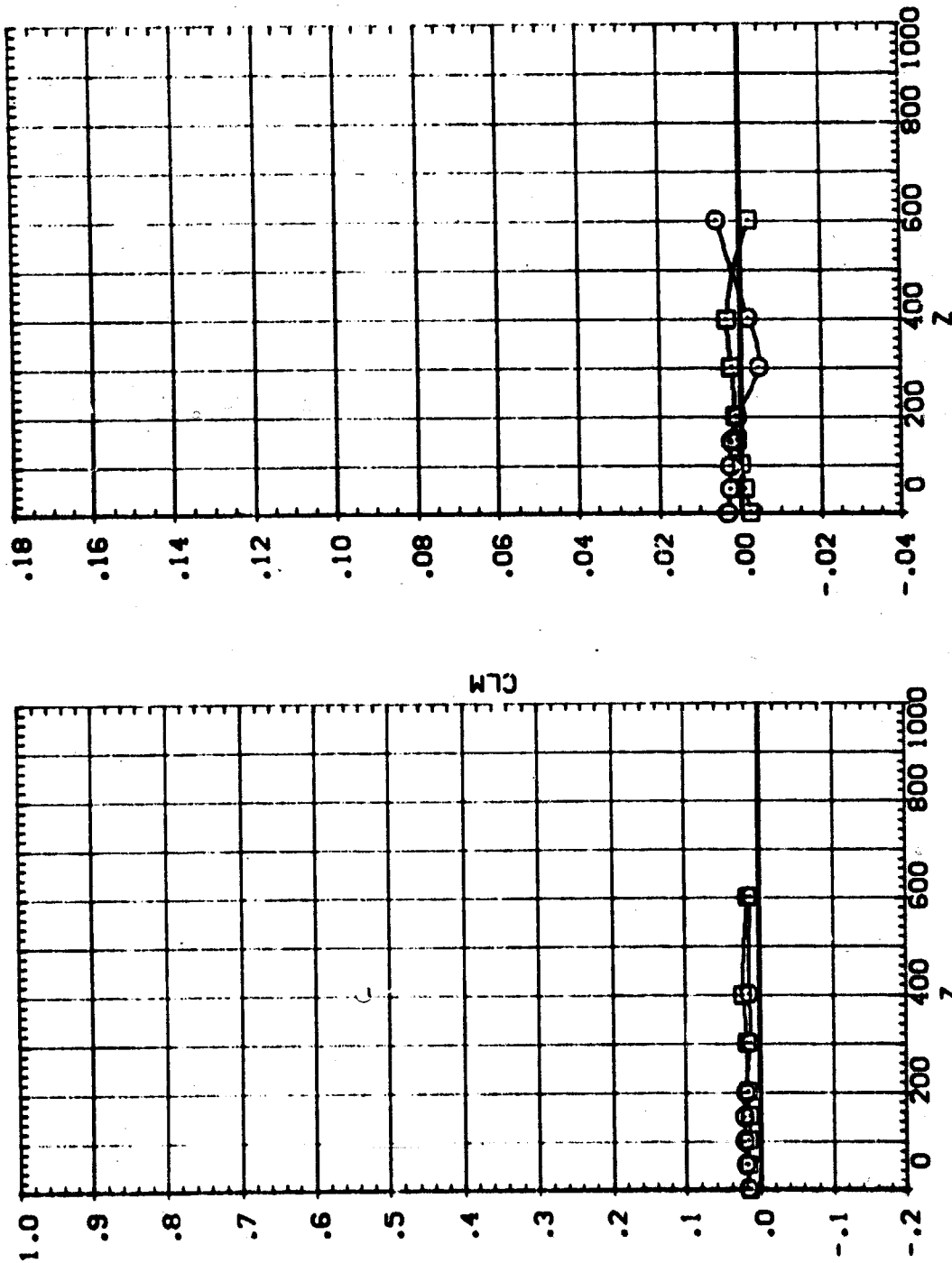


SR8 W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ373)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

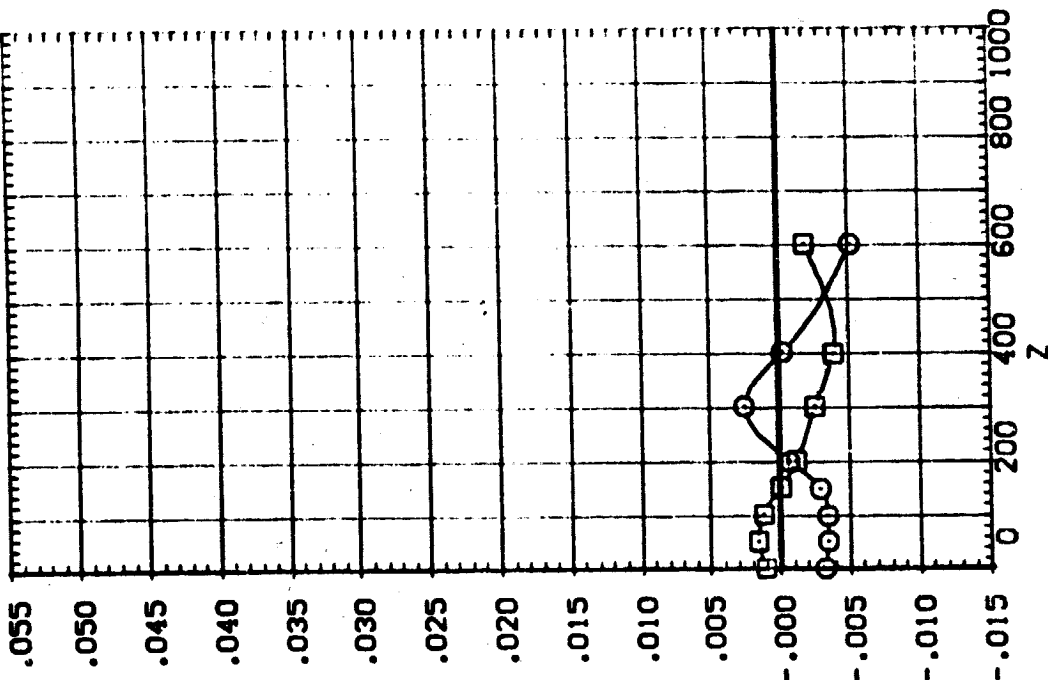
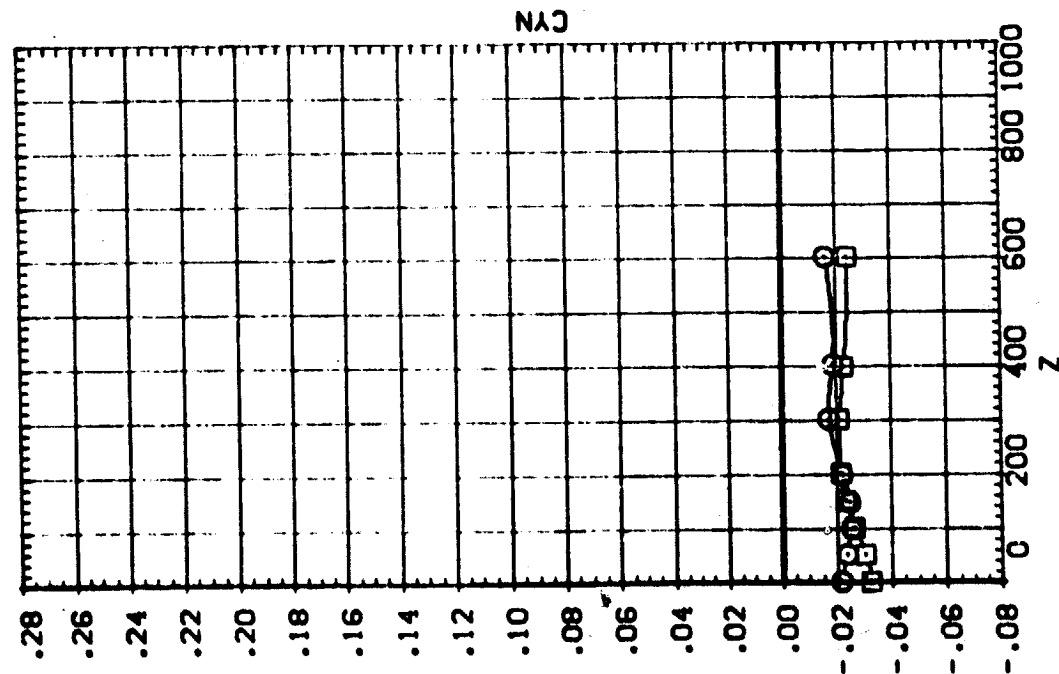
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 900.810 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | 5.000 | DBETA | 5.000 | |
| | | Y | .000 | PC-MBR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ373)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X .316 HACH 110.000
 500.810 .000 BETA .000
 DALPHA 5.000 DBETA 5.000
 Y .000 POWER .000



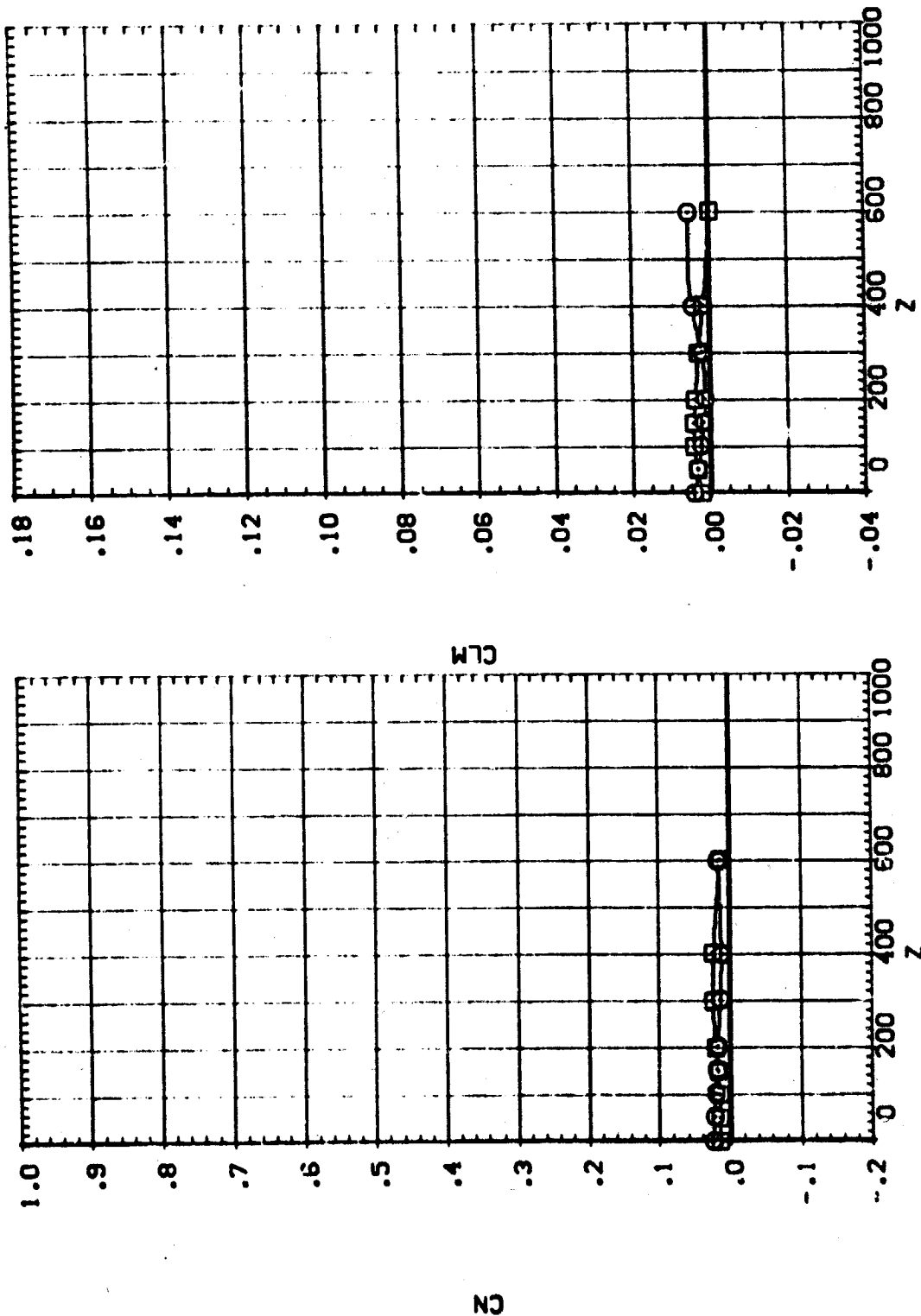
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET



1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ374)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

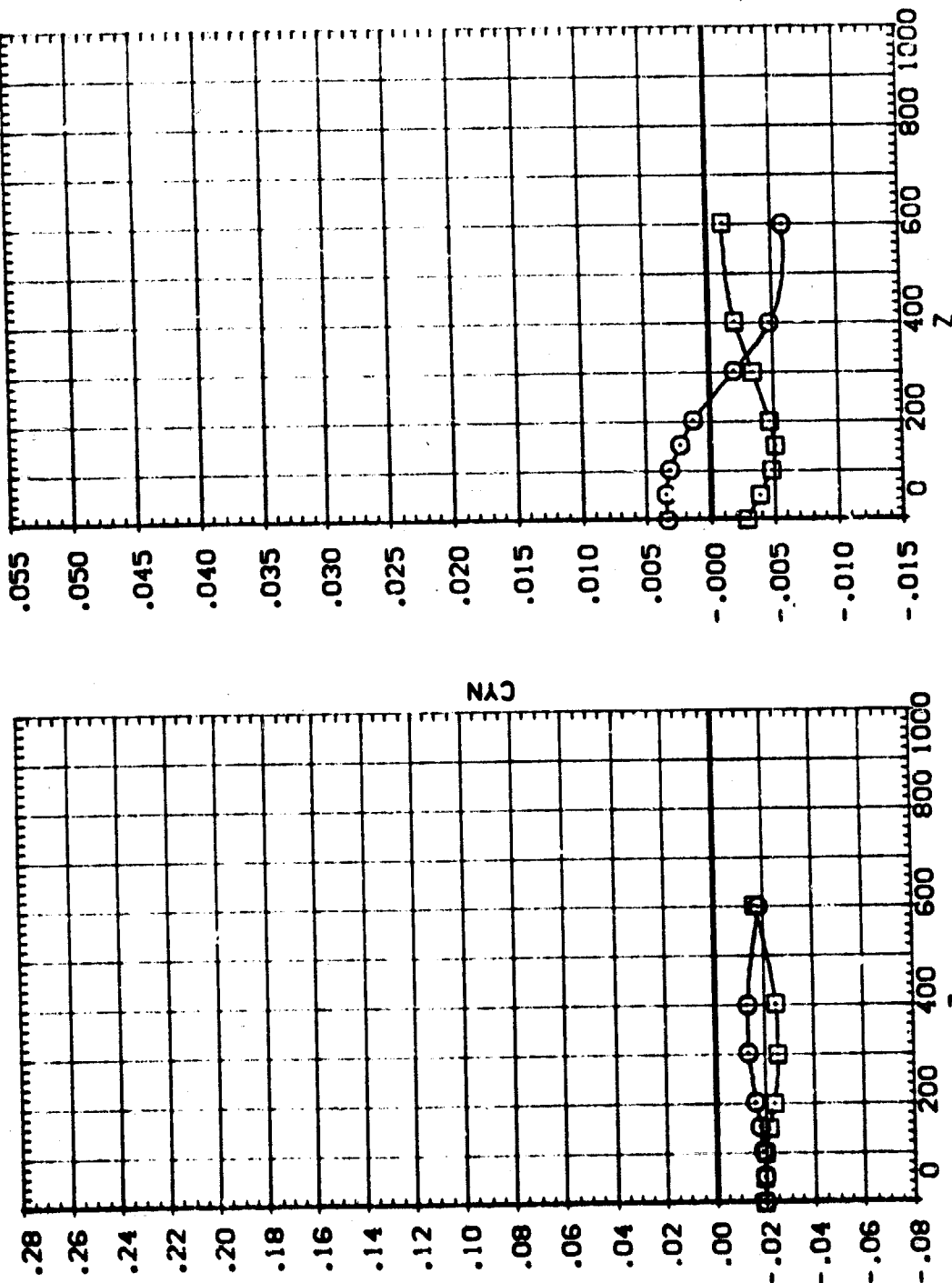
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|--------|
| | | MACH | PTOTAL | BETA | PC-MER |
| ○ | .152 | 4.530 | 110.000 | .000 | .000 |
| □ | 900.690 | .000 | 5.000 | 5.000 | .000 |



SYMBOL
 ○
 □

PARAMETRIC VALUES
 X .152 MACH 4.530 PTOTAL 110.000
 900.690 ALPHA .000 BETA .000
 DUALPHA 5.000 DBETA 5.000
 Y 200.000 PO+PR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

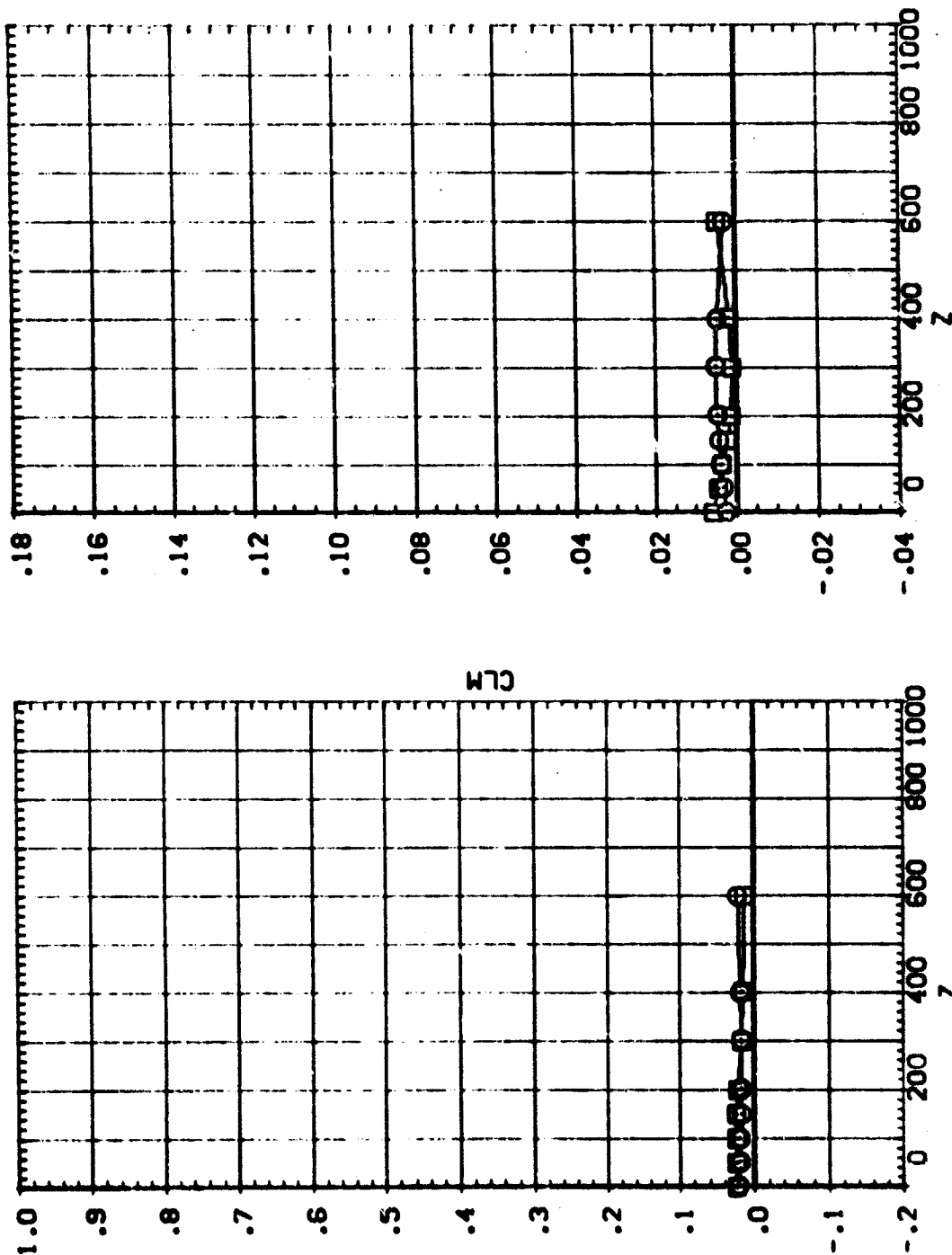


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ375)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

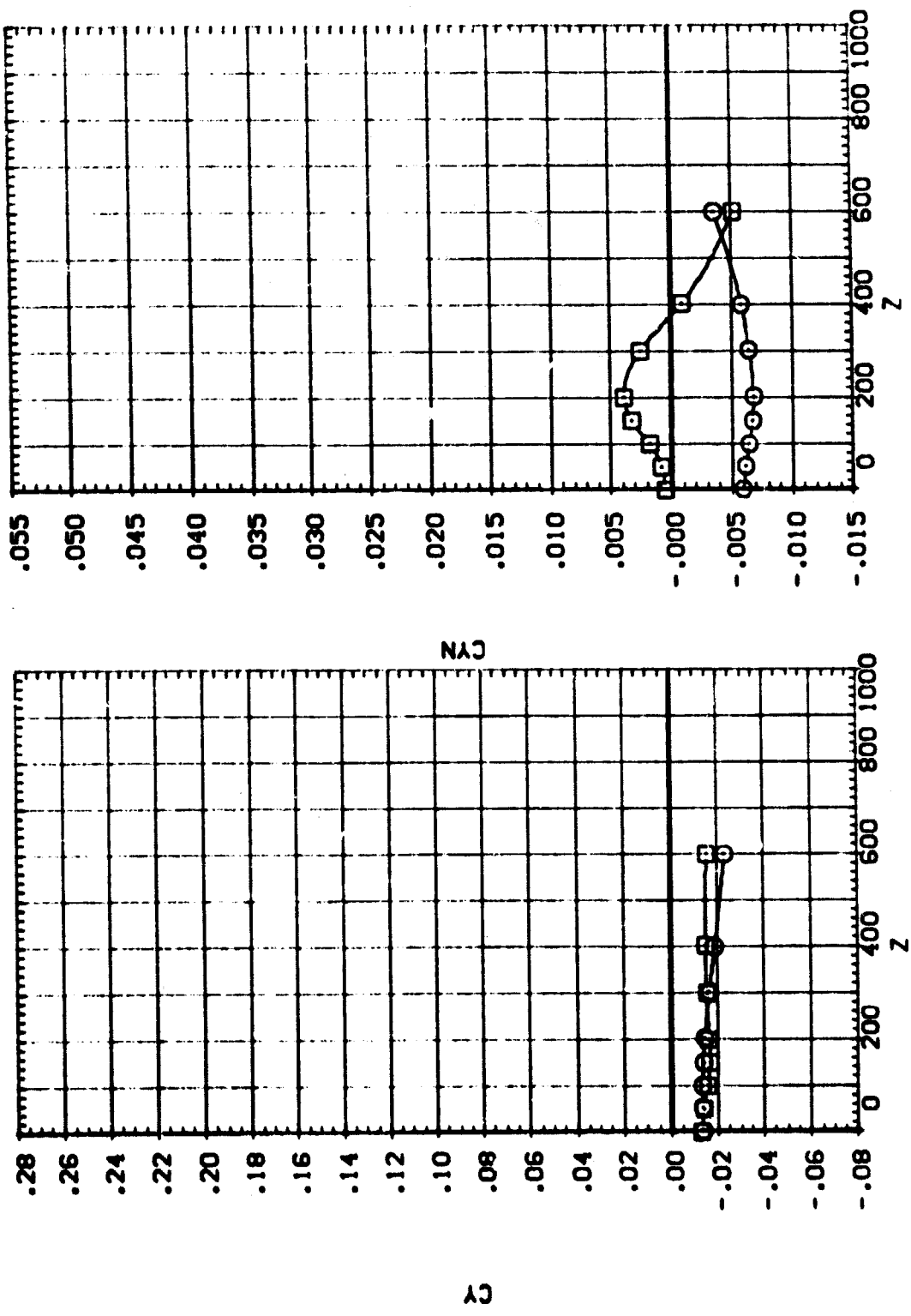
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | PTOTAL | 110.000 | |
| ○ | 500.730 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | 5.000 | DBETA | 5.000 | |
| | | Y | 400.000 | PO+PR | .000 | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL \square \circ

| PARAMETRIC VALUES | | | |
|-------------------|---------|--------|---------|
| X | .183 | HACH | 4.530 |
| Y | 500.730 | ALPHA | .000 |
| | | BETA | 5.000 |
| | | POWBR | .000 |
| | | POTIAL | 110.000 |

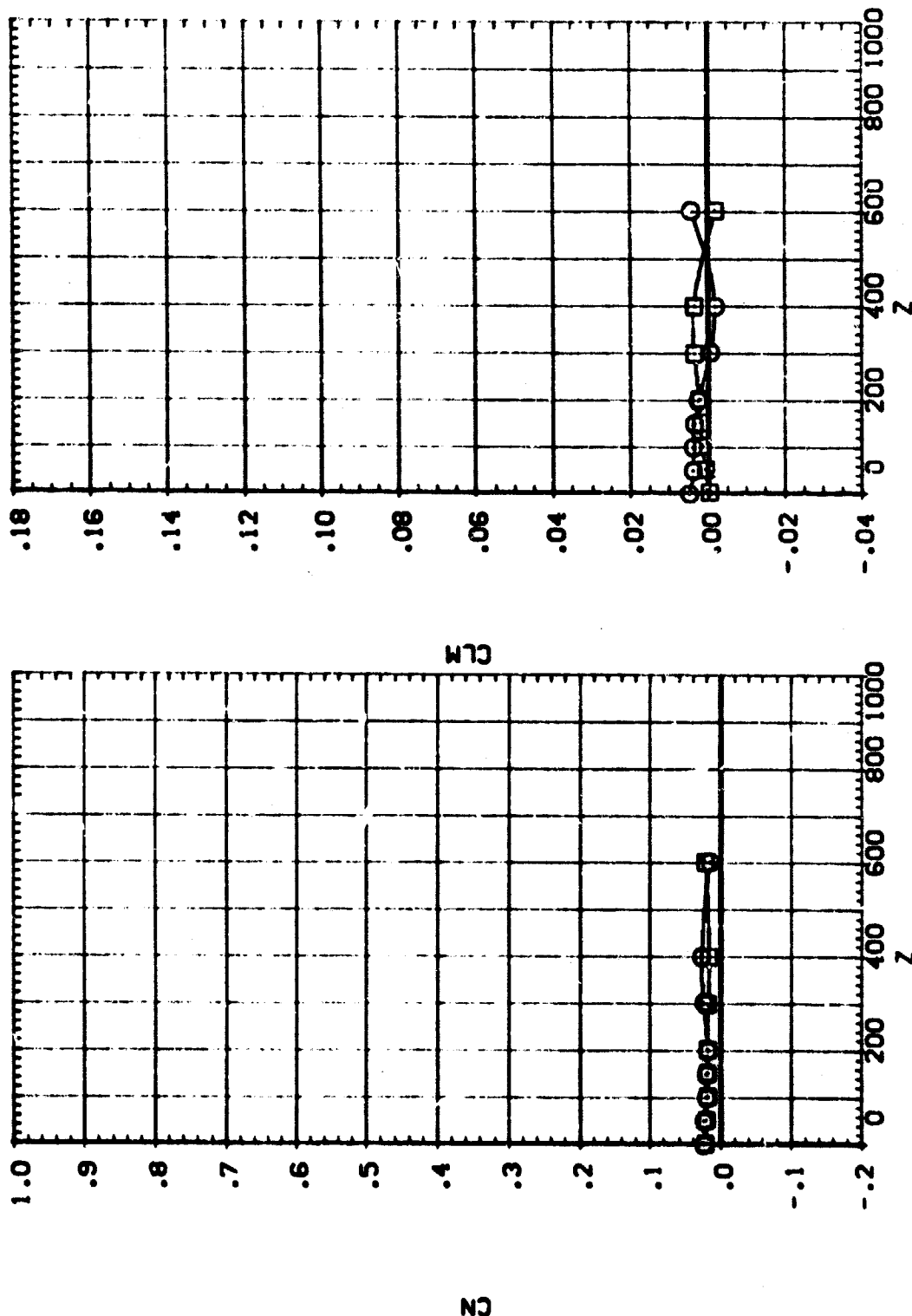


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ376)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|-------|
| | | MAOH | PTOTAL | BETA | POWER |
| ○ | .255 | 4.530 | 110.000 | .000 | .000 |
| □ | 900.690 | .000 | BETA | -5.000 | .000 |
| | | ALPHA | 5.000 | DETA | |
| | | Y | 200.000 | POWER | .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ376)

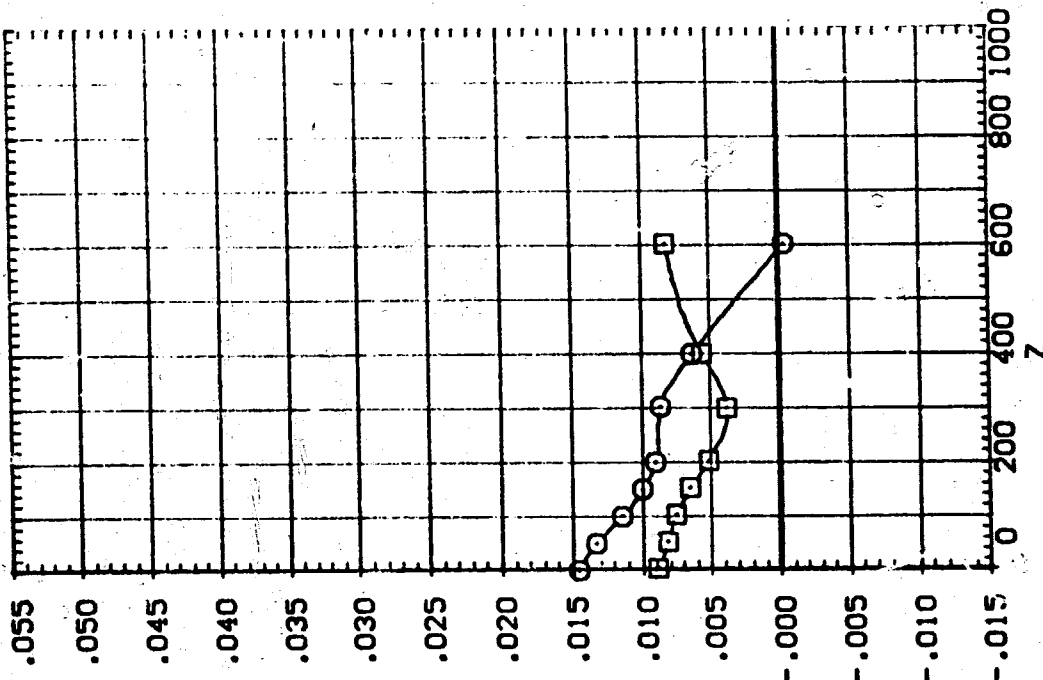
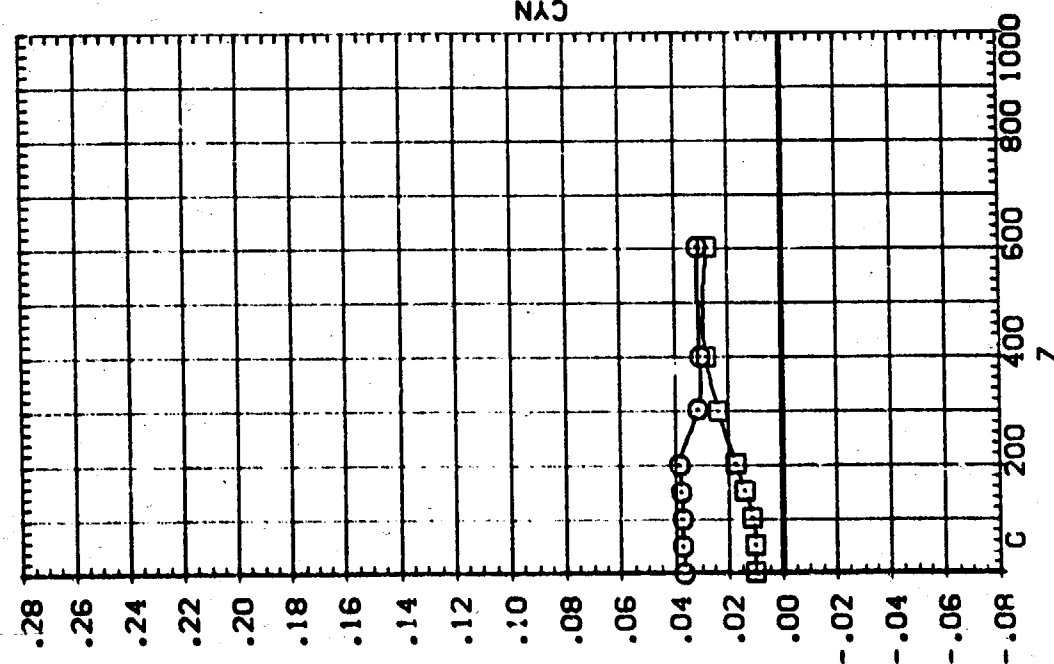
SYMBOL

○

□

PARAMETRIC VALUES
 X .256 MACH 4.530 P/DOTAL 110.000
 900.690 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA -5.000
 Y 200.000 PC-HSR .000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

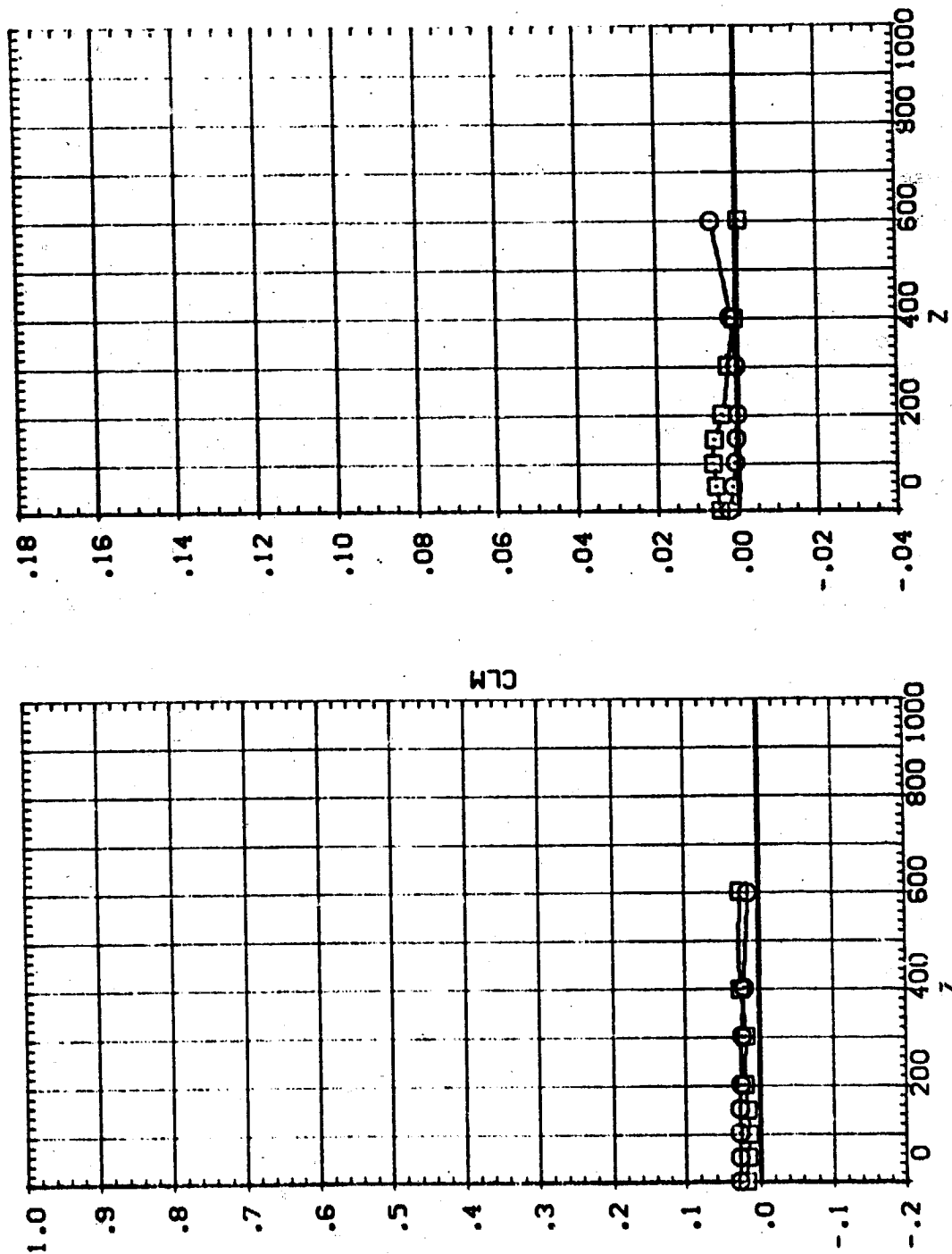


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ377)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

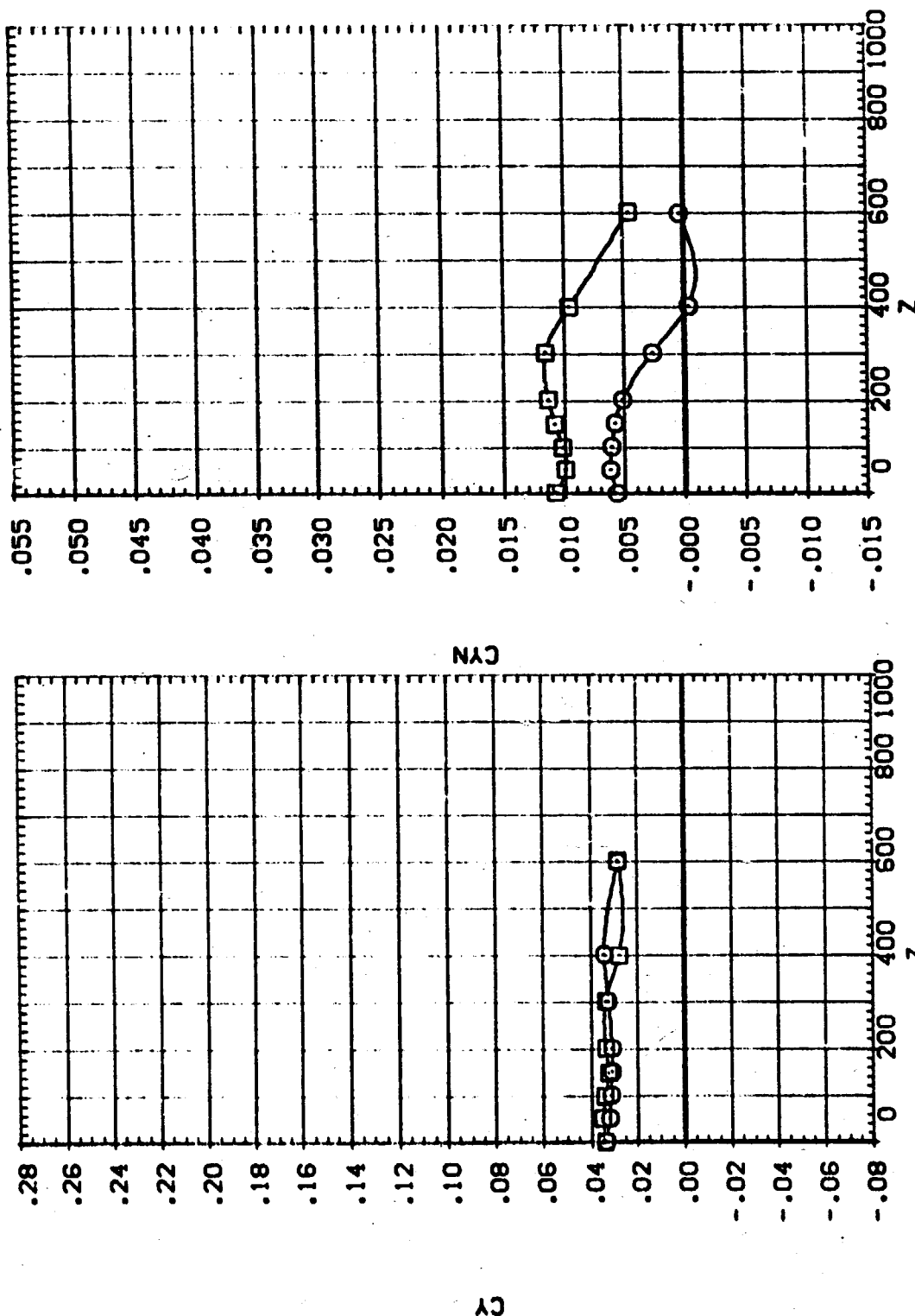
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 900.510 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | 5.000 | DBETA | -5.000 | |
| | | Y | 400.000 | PCHSR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ377)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X .369 MACH 4.530 PTOTAL 110.000
 900.510 ALPHA .000 DELTA .000
 DALPHA 5.000 DBETA -5.000
 Y 400.000 PCHEB .000

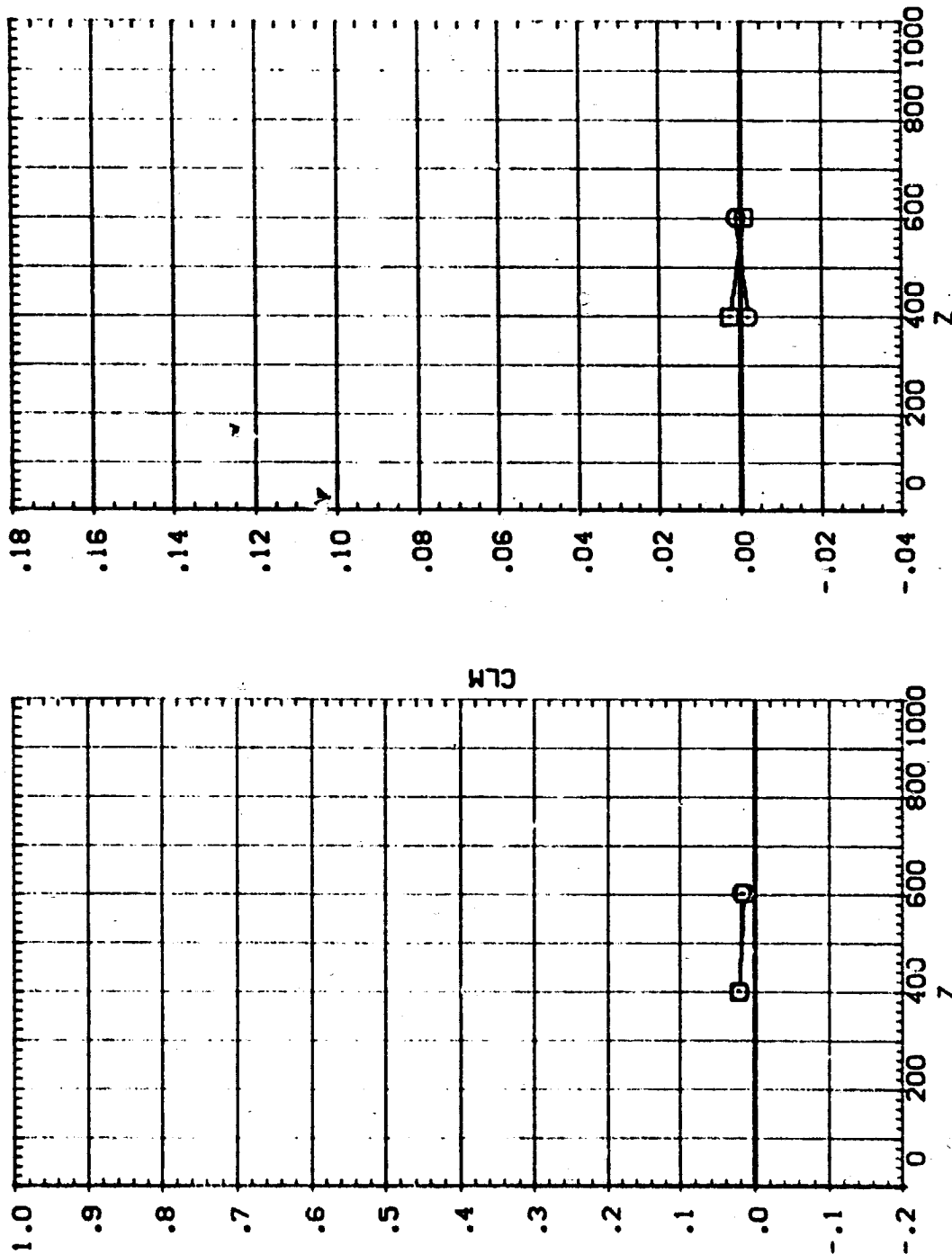


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ378)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|--------|-------|
| | | MACH | PTOTAL | BETA | DBETA | PCHBR |
| ○ | .307 | 4.530 | 110.000 | .000 | -5.000 | .000 |
| □ | 900.600 | .000 | .000 | .000 | .000 | .000 |

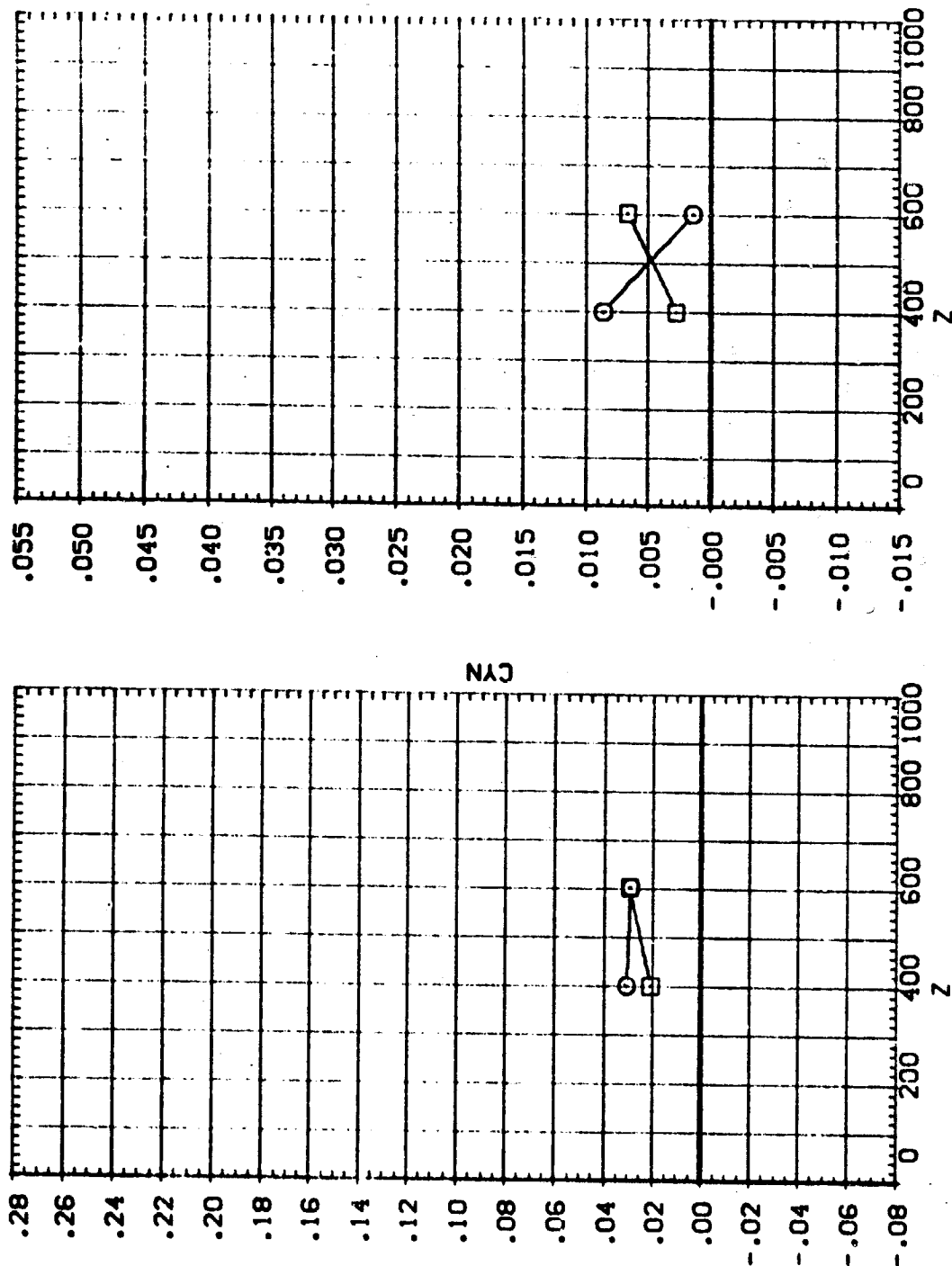


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ378)

SYMBOL X
 ○
 □

PARAMETRIC VALUES
 MACH .307
 ALPHA 900.600
 DALPHA 110.000
 Y .000
 BETA .000
 DBETA -5.000
 PCFMR .000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



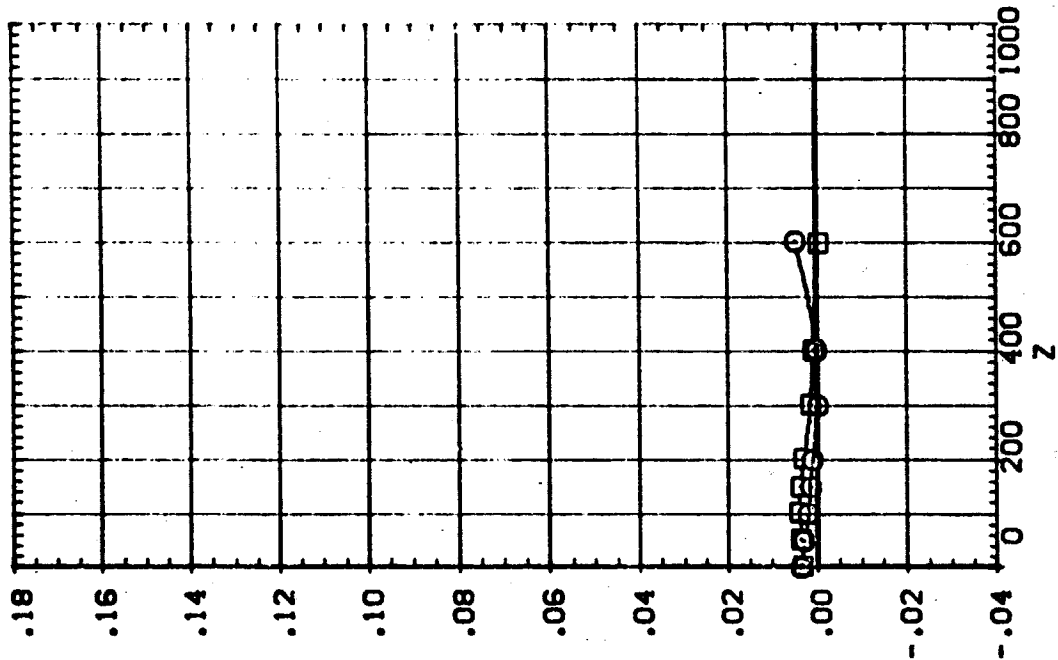
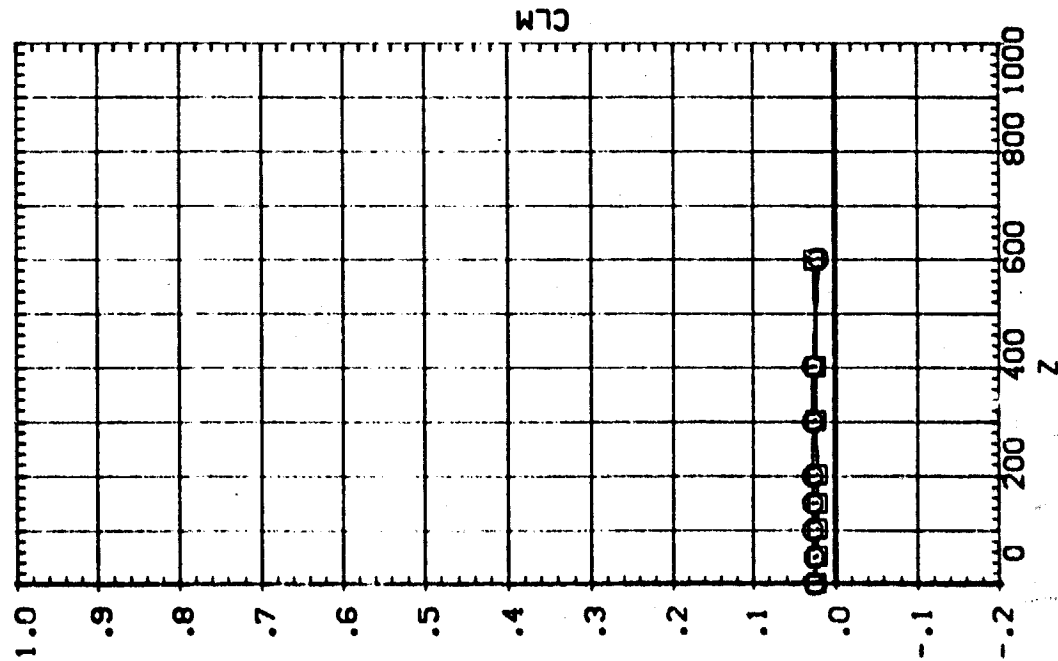
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ379)

SYMBOL X
 ○
 □

| PARAMETRIC VALUES | | | | |
|-------------------|---------|---------|---------|--|
| MACH | 4.530 | P TOTAL | 110.000 | |
| ALPHA | .000 | BETA | .000 | |
| DALPHA | 5.000 | DBETA | -10.000 | |
| Y | 400.000 | PC+PR | .000 | |

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

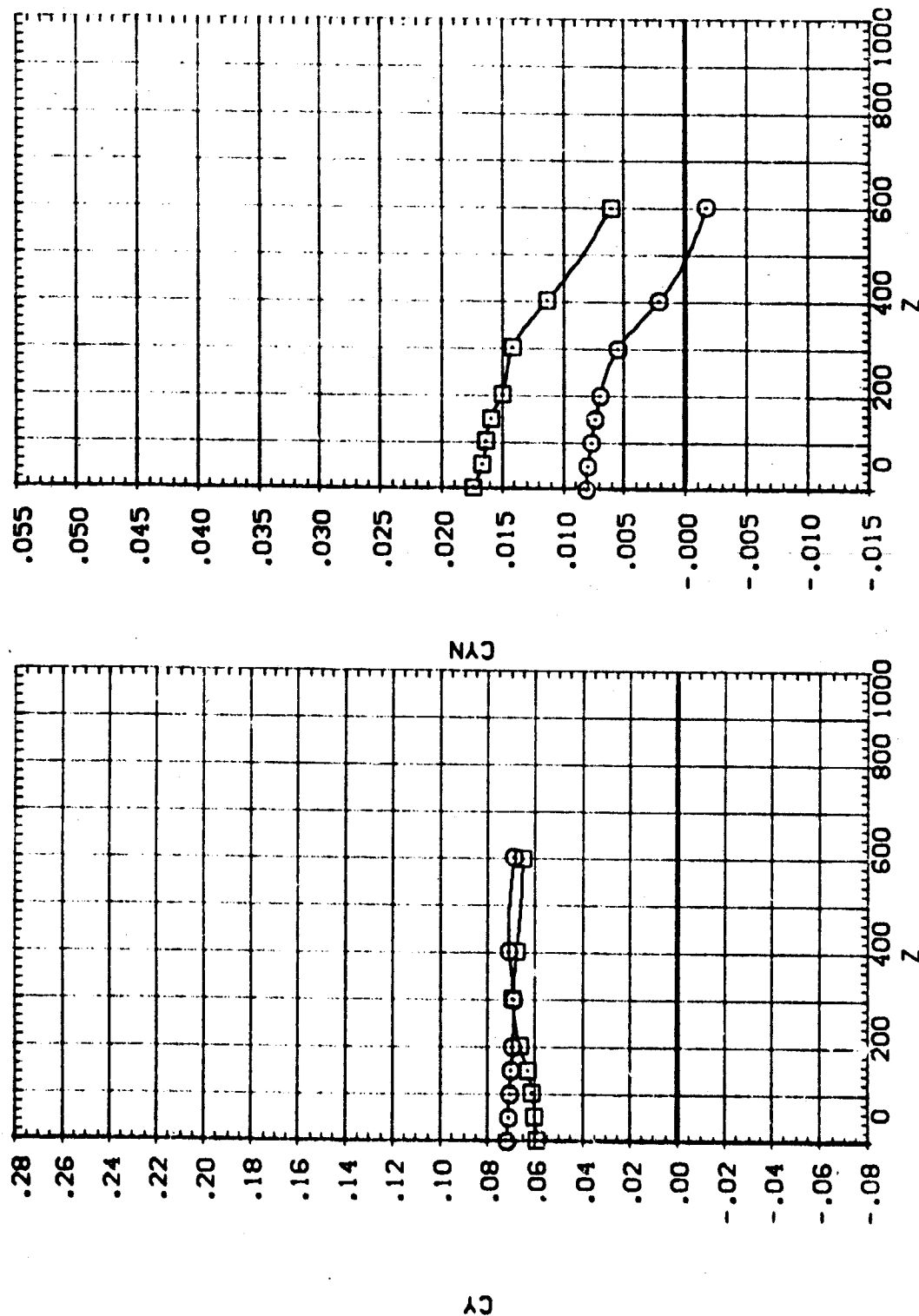


[A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ379)

SYMBOL X
 ○ 900.520
 □ .302

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA -10.000
 Y 400.000 PC-MBR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

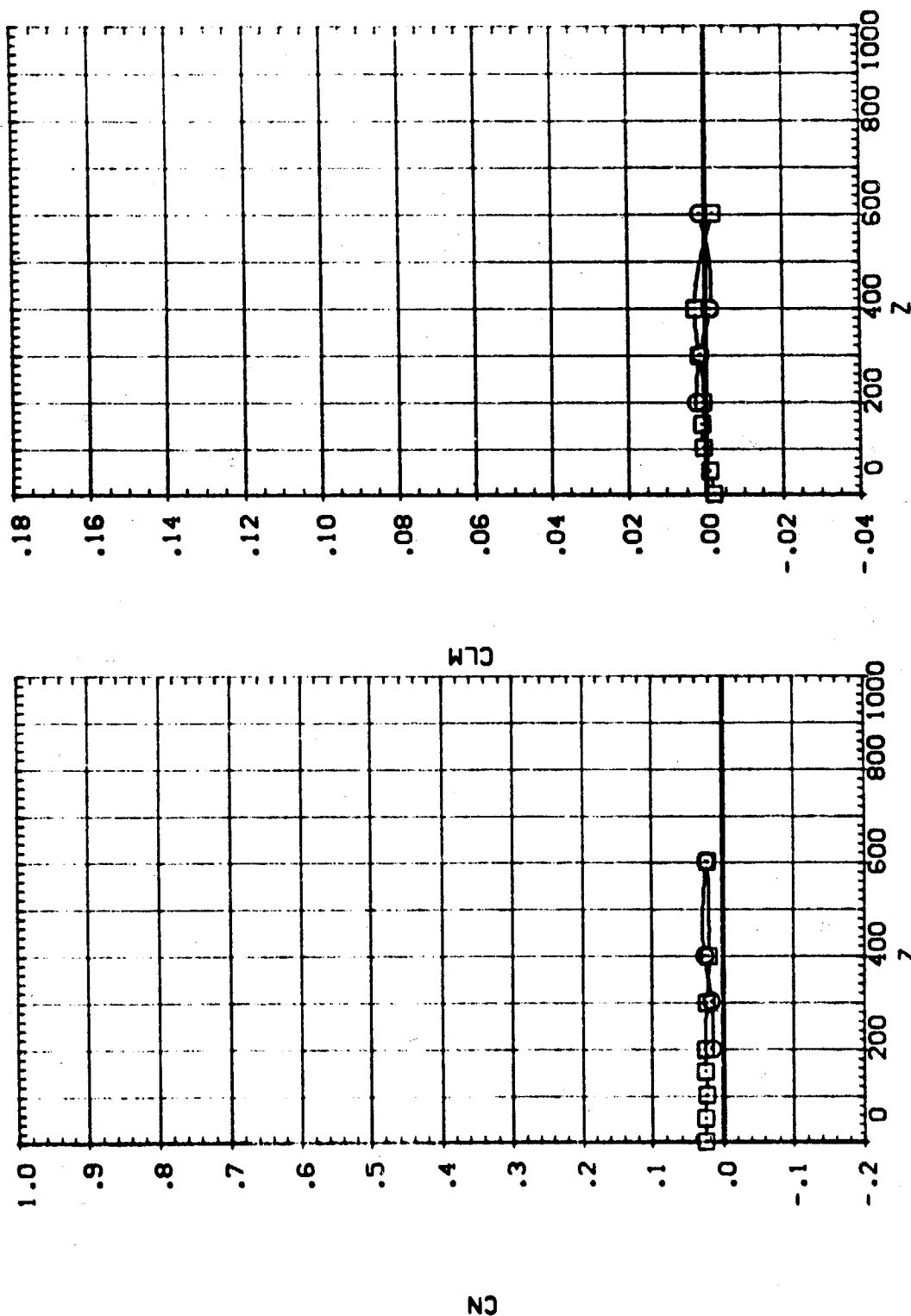


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ380)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|---------|---------|--|
| | | | 4.530 | P TOTAL | 110.000 | |
| □ | 900.670 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | 5.000 | DBETA | -10.000 | |
| | | Y | 200.000 | PCMBR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

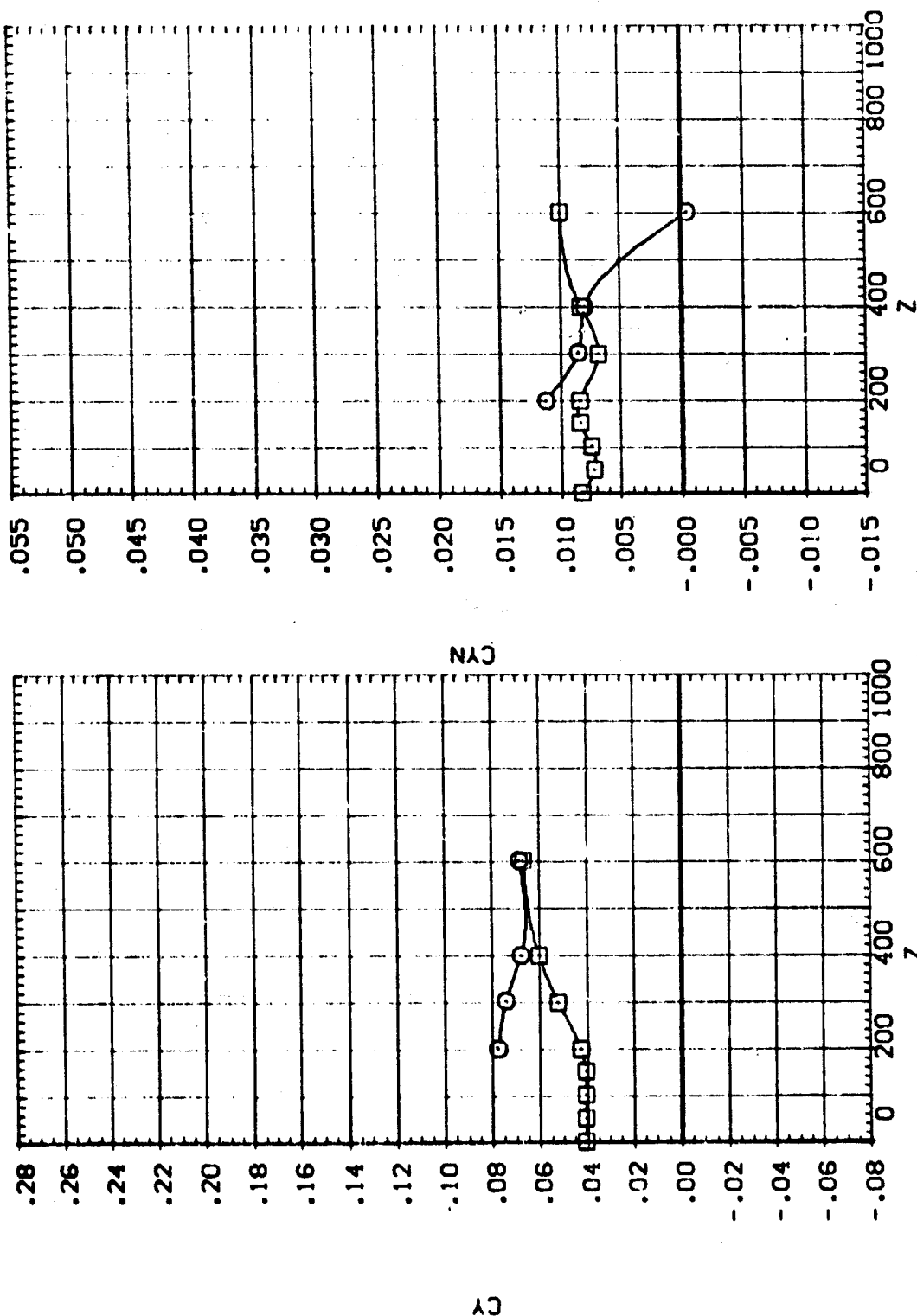
1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ380)

SYMBOL

○ □

| PARAMETRIC VALUES | |
|-------------------|---------|
| MACH | 4.530 |
| PTOTAL | 110.000 |
| BETA | .000 |
| ALPHA | .000 |
| DBETA | -10.000 |
| PC-MER | .000 |
| Y | 200.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

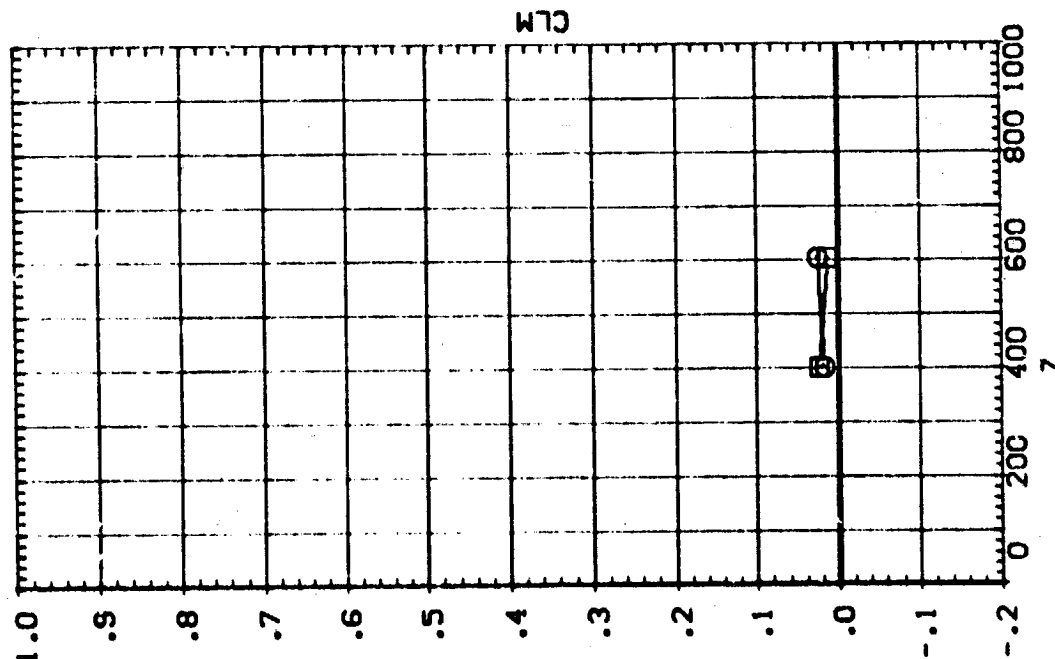
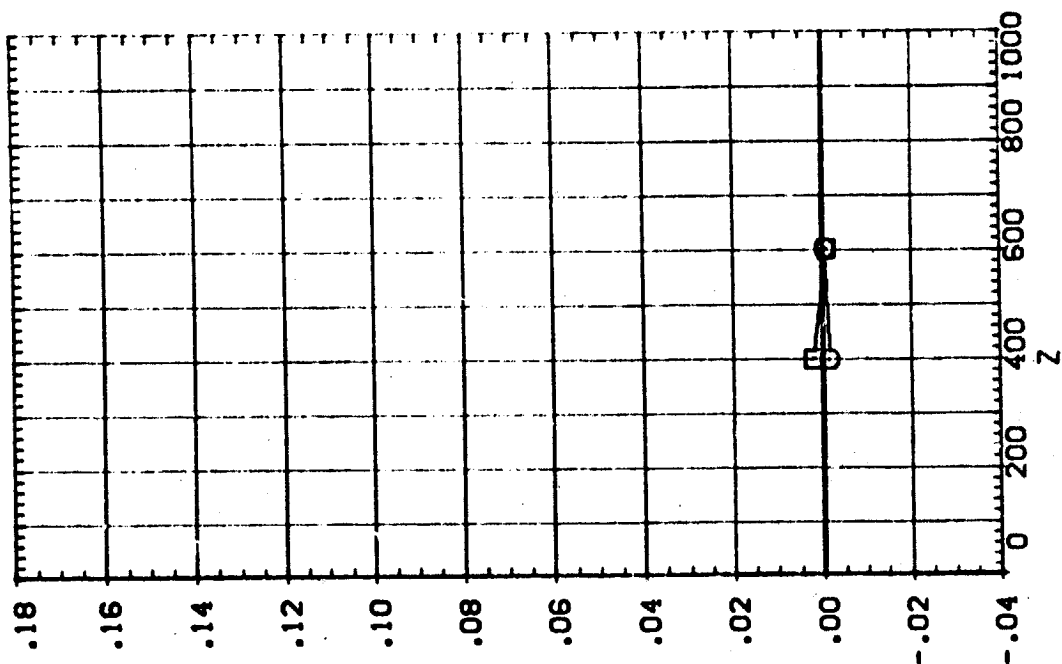


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ381)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------------------------|---------|-------------------|---------|------|---------|--------|
| | | MACH | PTOTAL | BETA | DBETA | PC-HBR |
| <input type="checkbox"/> | .190 | 4.530 | 110.000 | .000 | -10.000 | .000 |
| <input type="checkbox"/> | 900.700 | 5.000 | .000 | .000 | .000 | .000 |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ381)

SYMBOL

X

○

□

MACH
ALPHA
DALPHA
V

.190

900.700

PARAMETRIC VALUES

4.530

.000

5.000

.000

PTOTAL

BETA

DBETA

PC-HBR

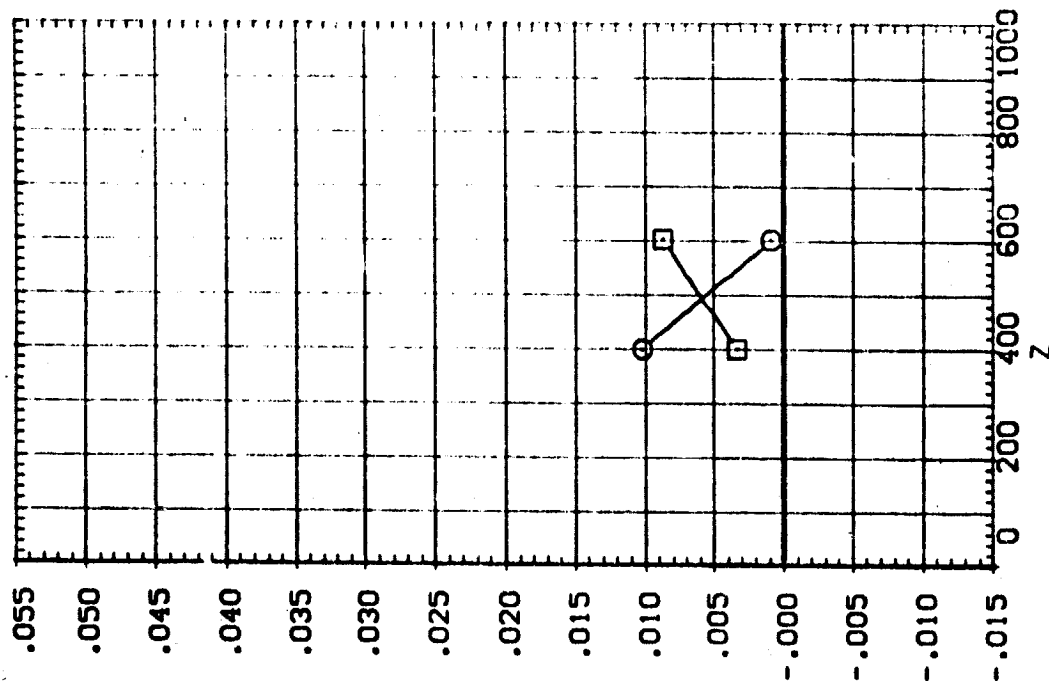
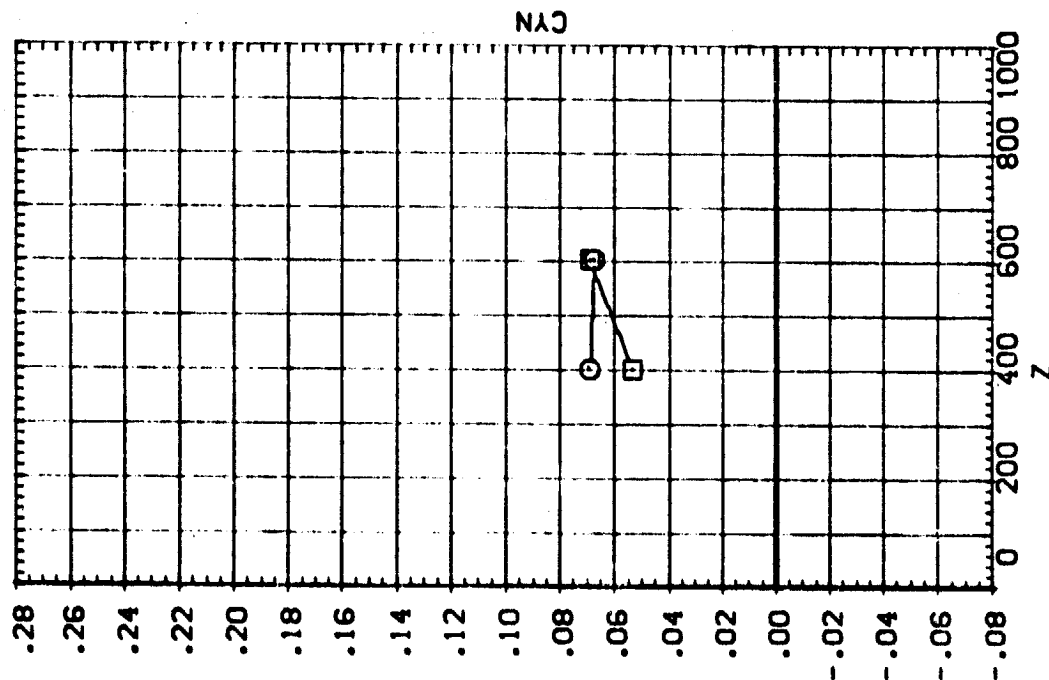
110.000

.000

-10.000

.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 05110 (RTJ382)

SYMBOL

□

X

903.370

MACH

.354

ALPHA

.000

PTOTAL

110.000

BETA

.000

DBETA

-20.000

PC45R

.000

Y

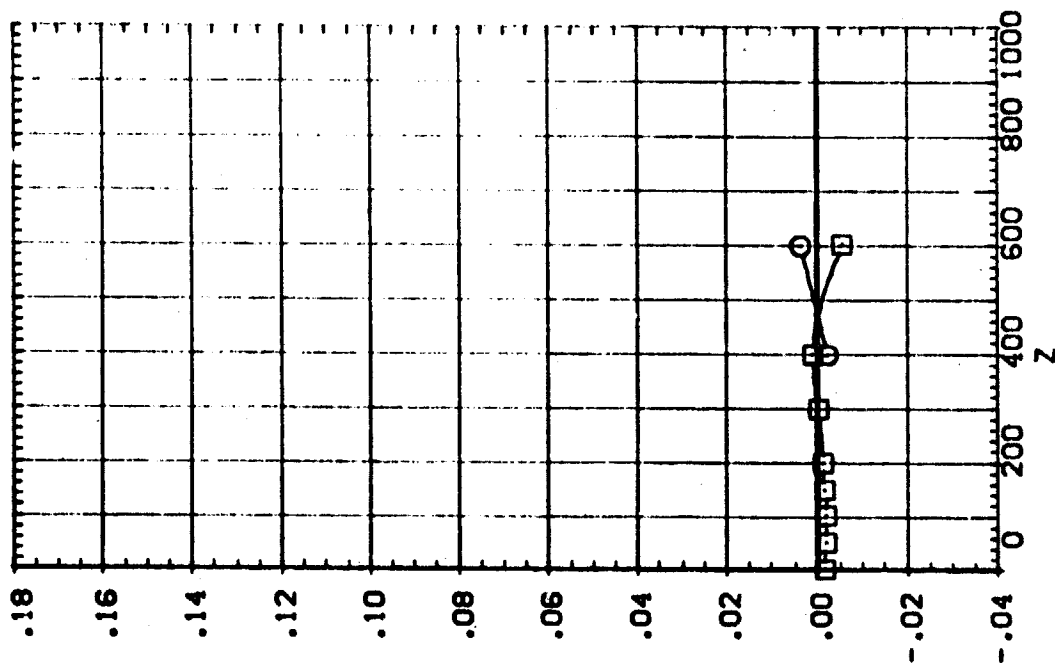
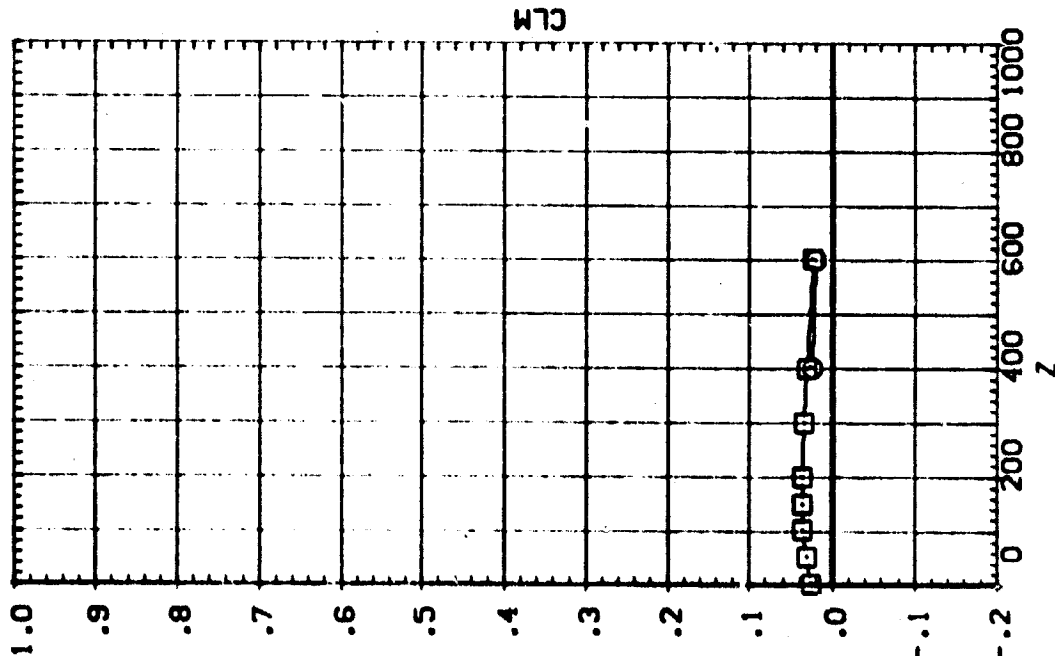
200.000

SEE THE ASSOCIATED DATA

DOCUMENT FOR REFERENCE

CHARACTERISTICS FOR

INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ382)

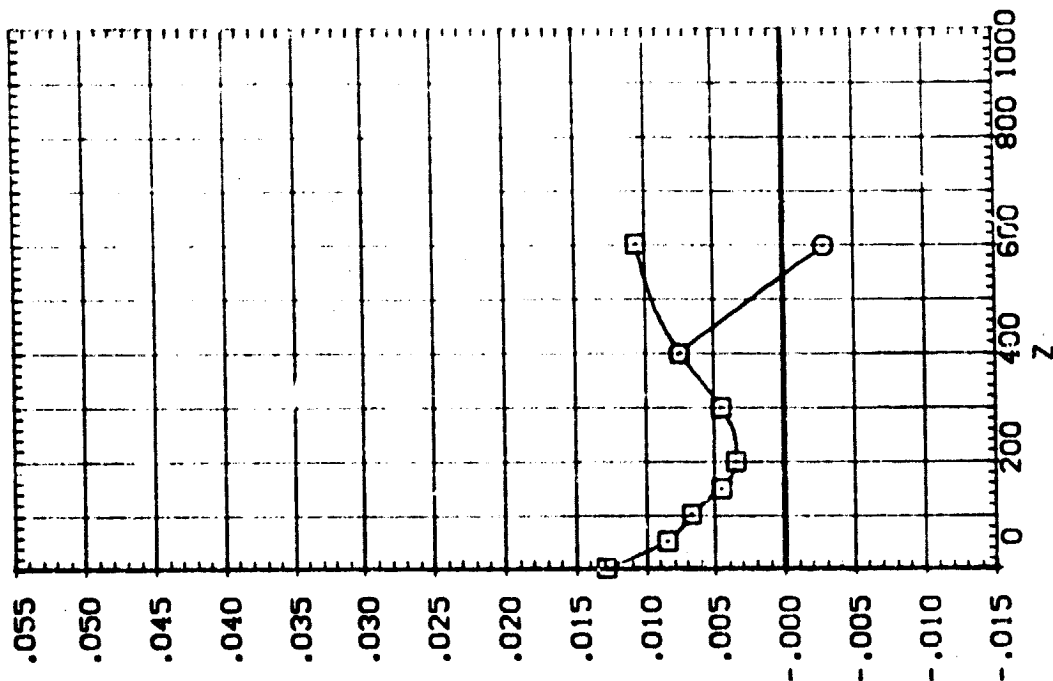
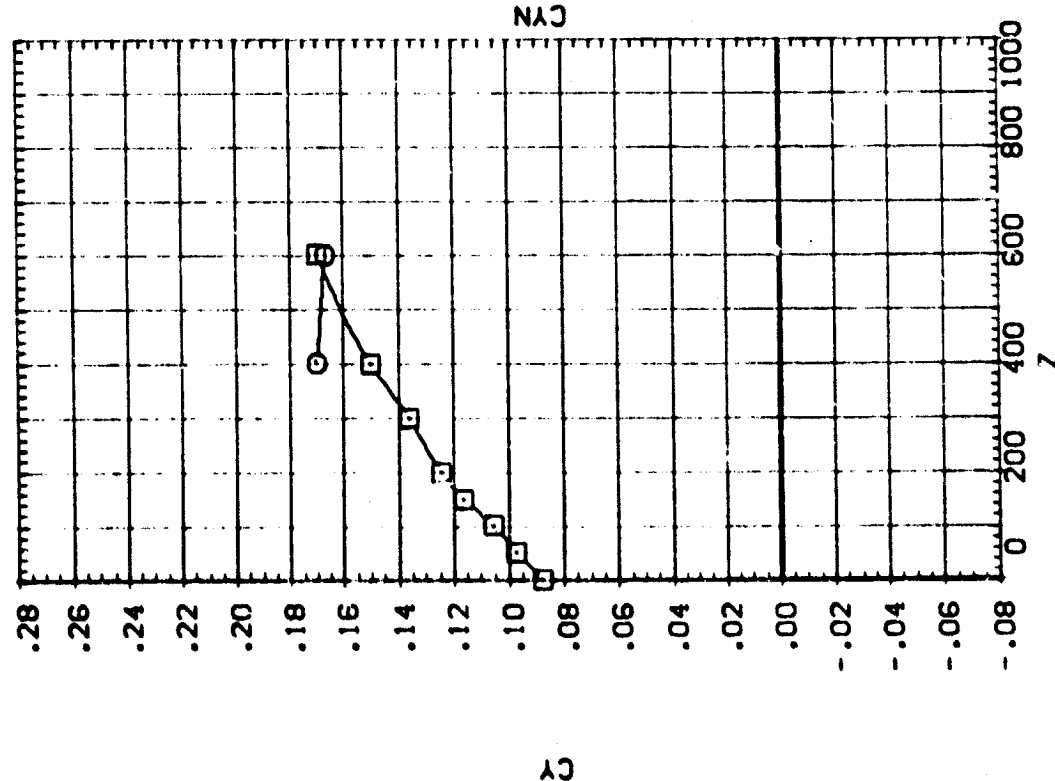
SYMBOL

○ □

PARAMETRIC VALUES

| | MACH | PIOTAL | BETA | DBETA | PC-MFR |
|---|---------|--------|-------|---------|--------|
| X | .354 | 4.530 | .000 | .000 | .000 |
| Y | 900.370 | .000 | 5.000 | -20.000 | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

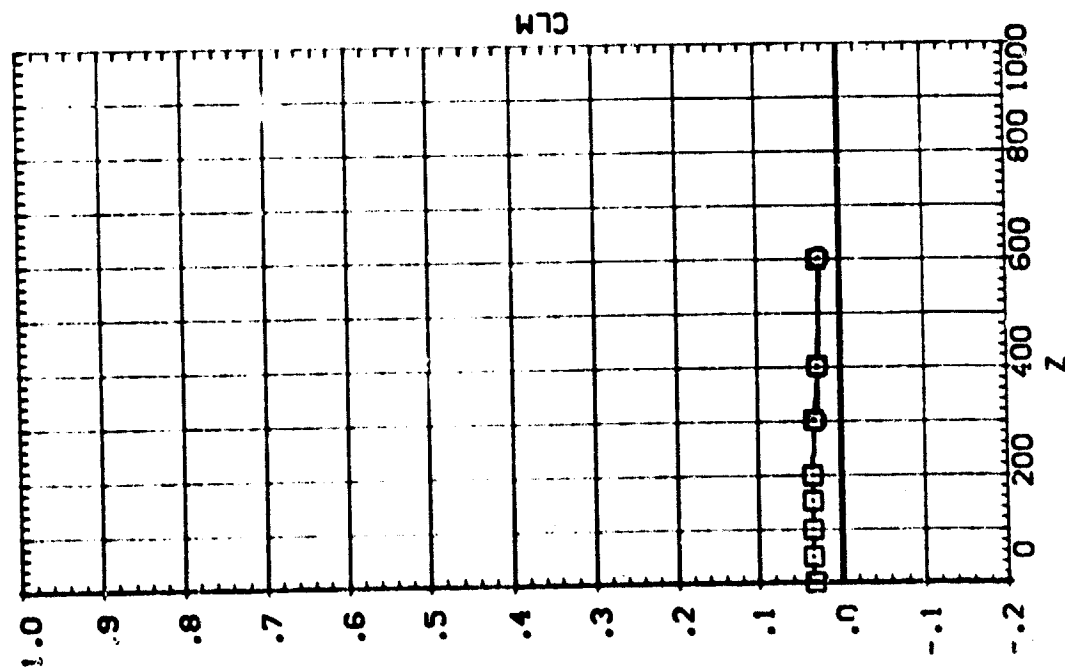
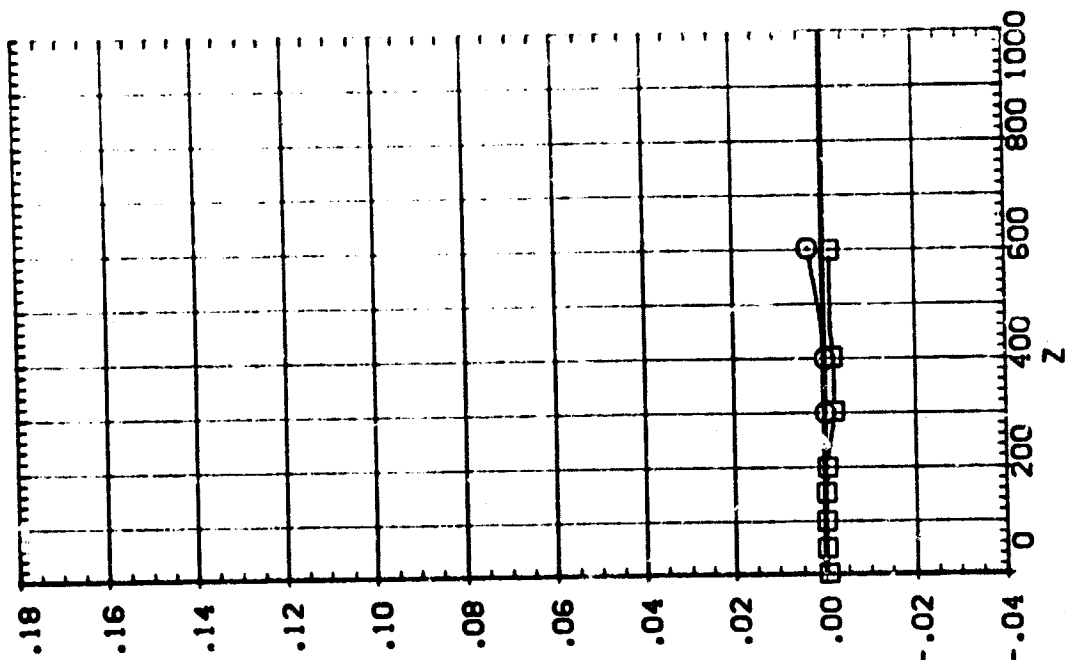


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

!A13 SR8(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ383)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| | | | |
|--------|---------|--------|-----------------------|
| SYMBOL | X | MACH | PARAMETRIC VALUES |
| □ | .538 | ALPHA | 4.530 P/TOTAL 110.000 |
| □ | 900.120 | DALPHA | .000 BETA .000 |
| | | Y | 5.000 DBETA -20.000 |
| | | | 400.000 PC-MFR .000 |



SR8 W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(S8) W/O PLUM'S SEPARATING FROM 09T10 (RTJ383)

SYMBOL

X

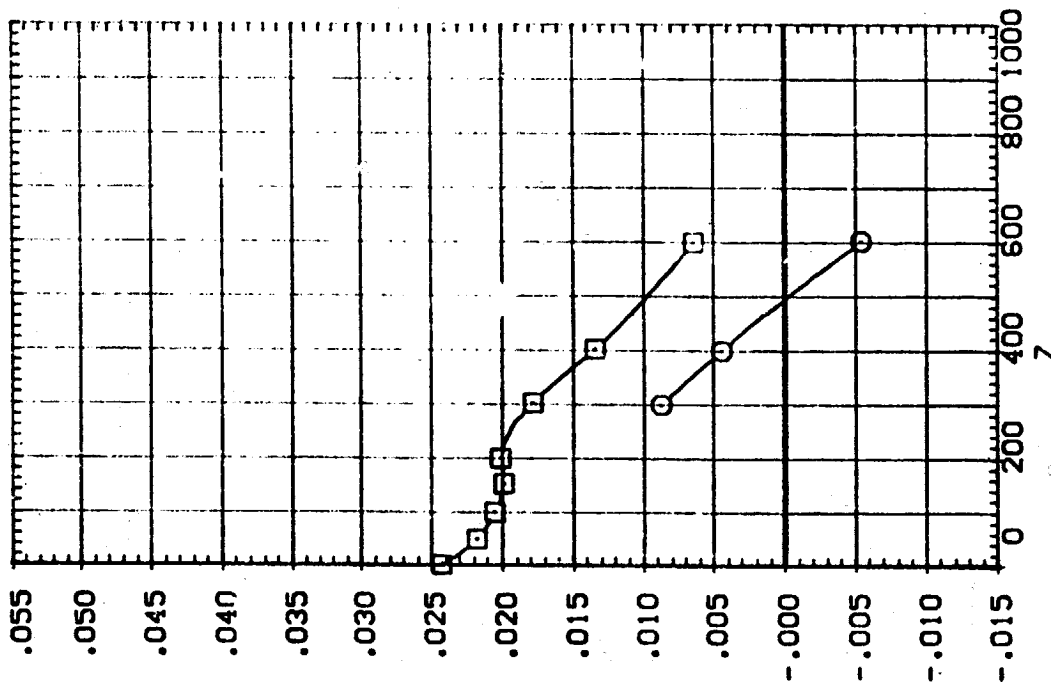
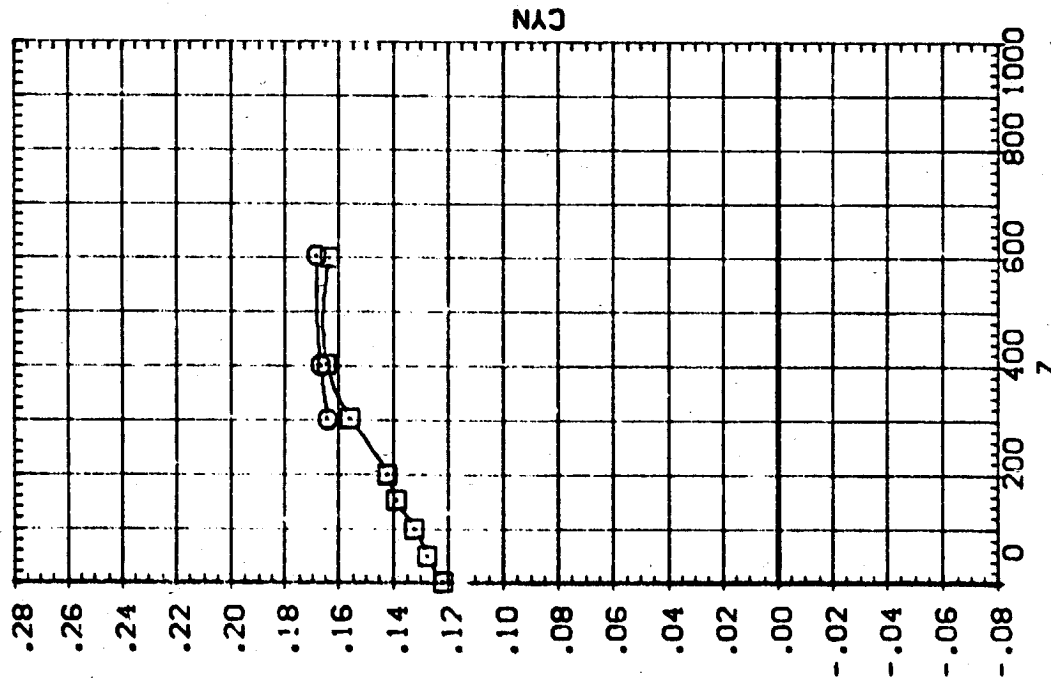
○

□

PARAMETRIC VALUES

MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA -20.000
 Y 400.000 PCWFR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

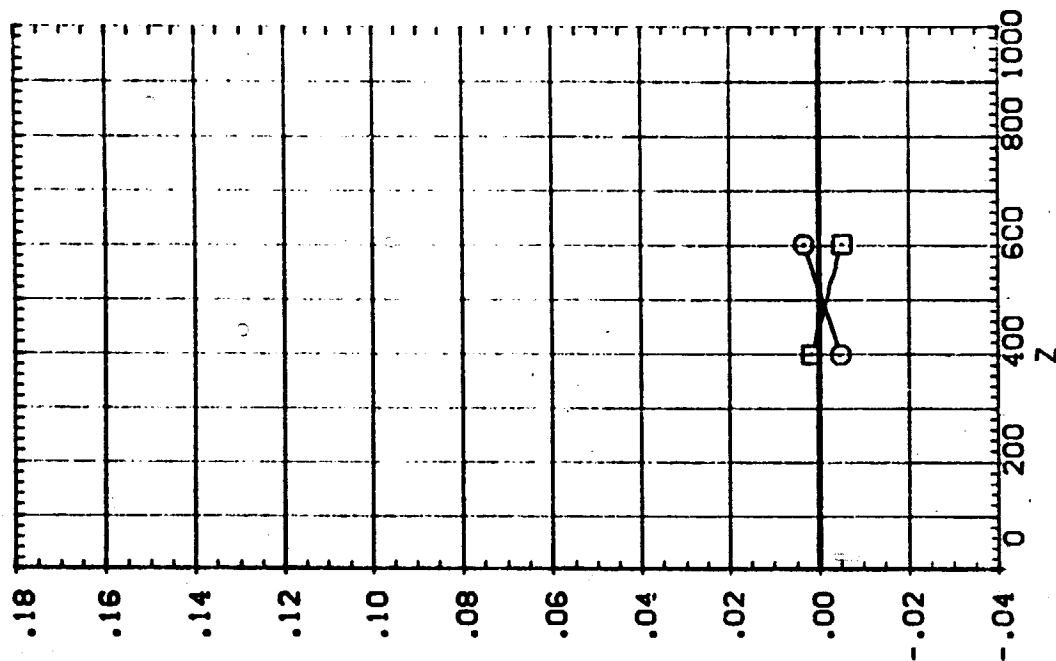
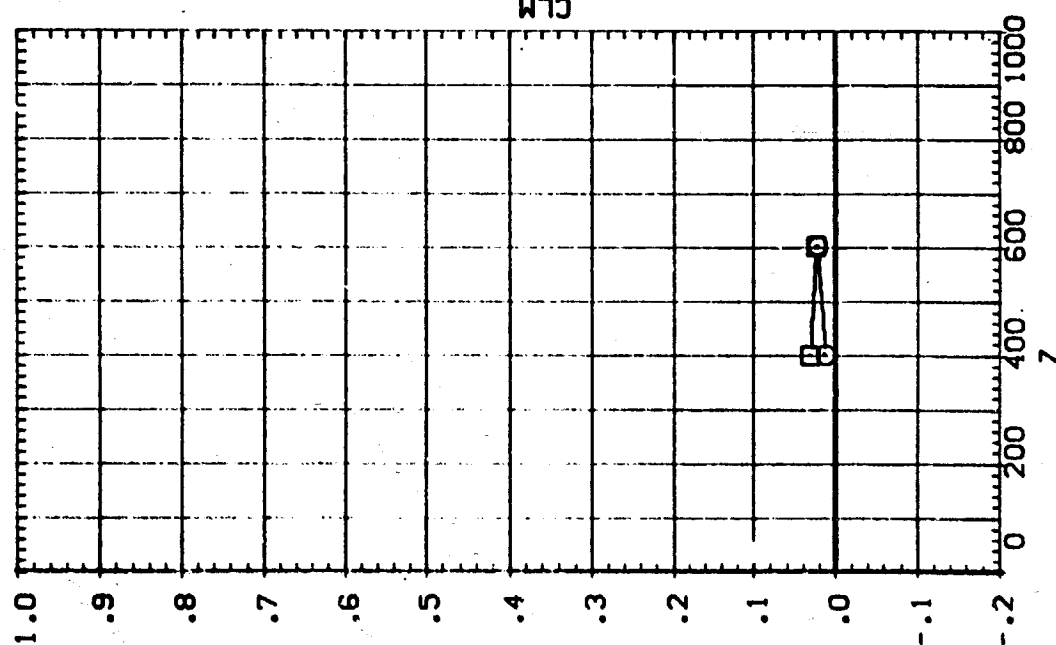


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ384)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|---------|---------|--|
| | | | 4.530 | PITOTAL | 110.000 | |
| ○ | 900.810 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | 5.000 | DBETA | -20.000 | |
| | | PC-MER | .000 | | .000 | |

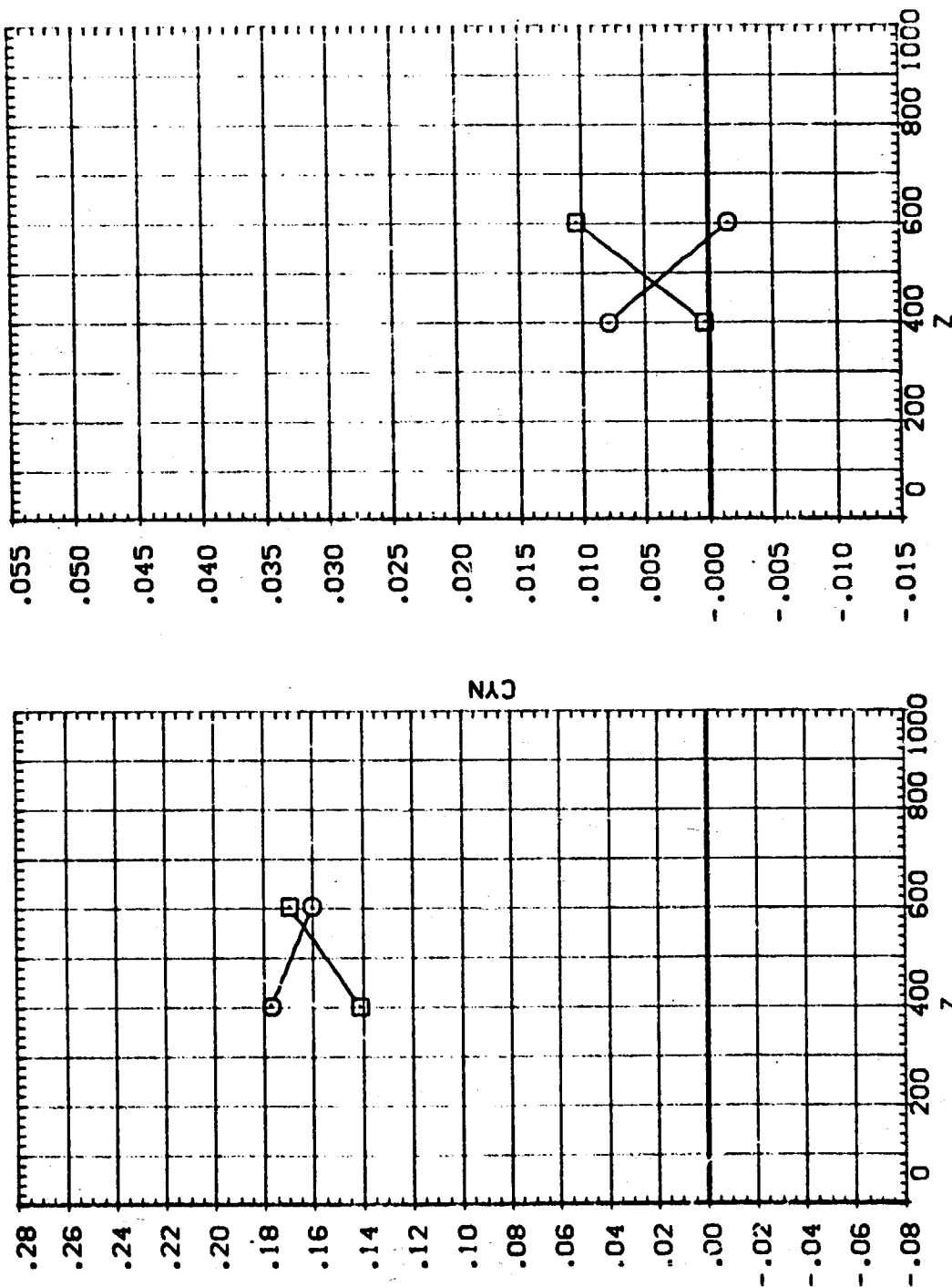


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ384)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|--------|---------|--|
| | | MACH | 4.530 | PTOTAL | 110.000 | |
| ○ | .019 | ALPHA | .000 | BETA | .000 | |
| □ | 500.810 | DALPHA | 5.000 | DBETA | -20.000 | |
| | | Y | .000 | PCFMR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ385)

SYMBOL

x

.237

MACH

4.530

PARAMETRIC VALUES

PTOTAL

110.000

BETA

.000

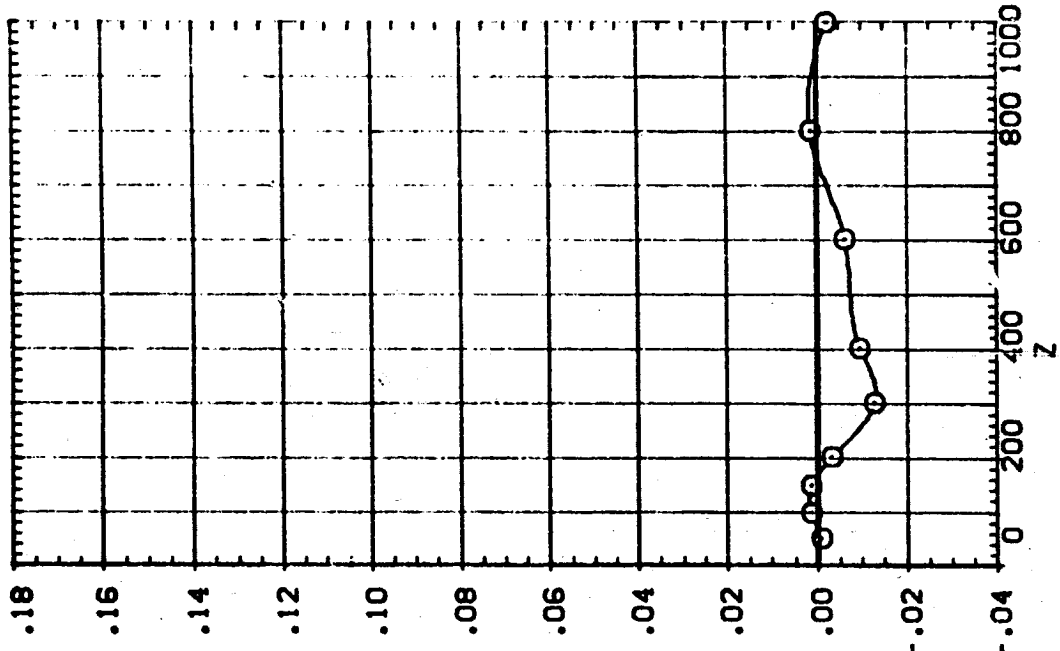
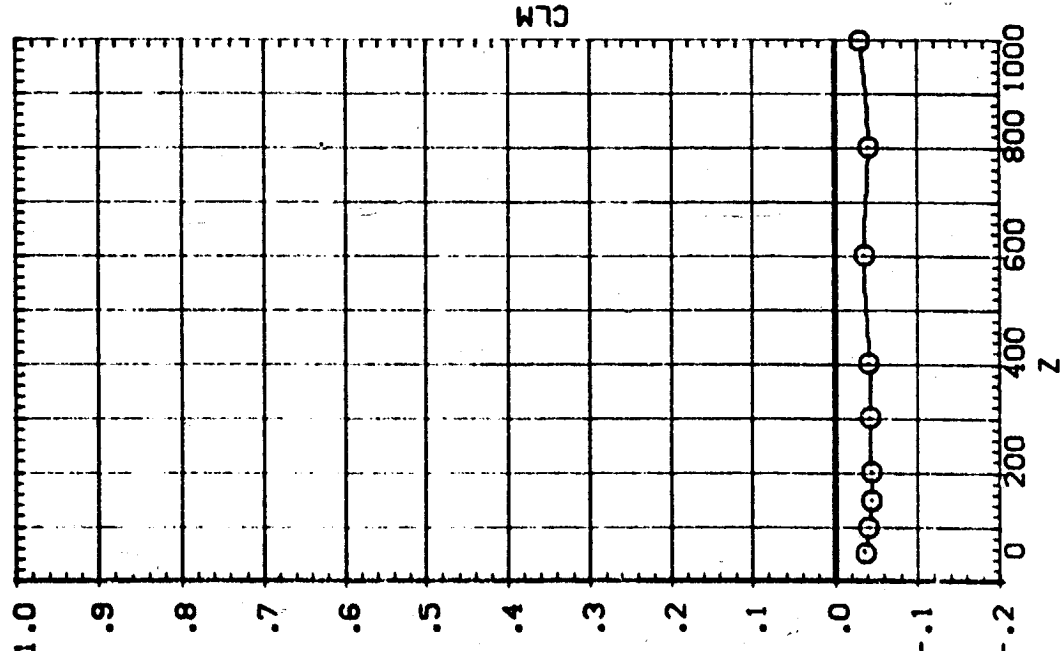
DBETA

5.000

POWER

.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

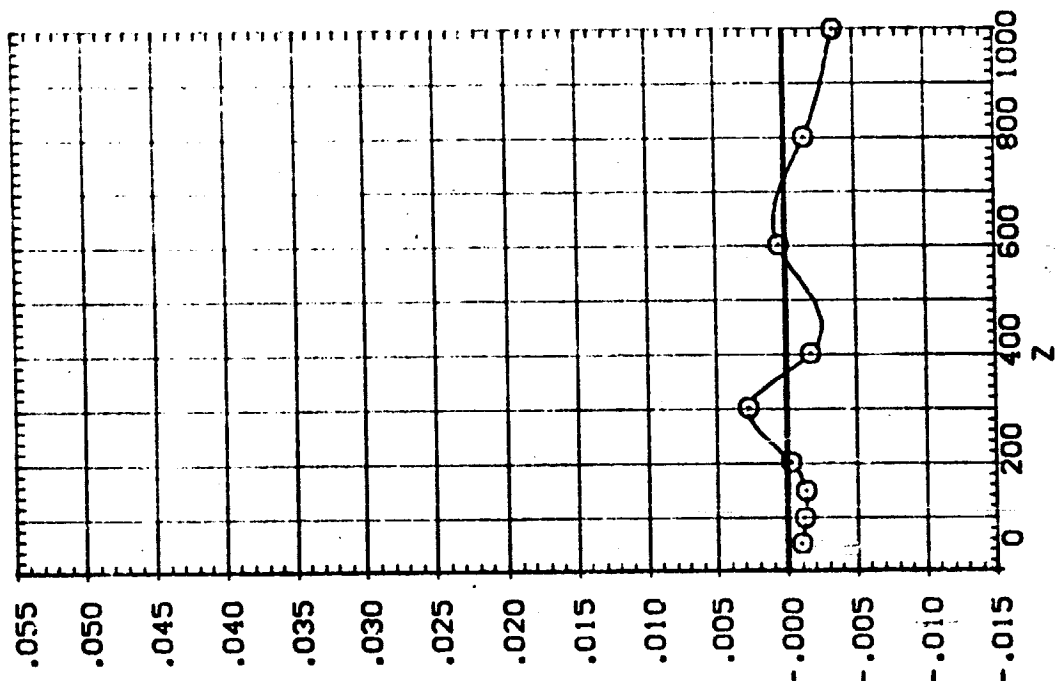
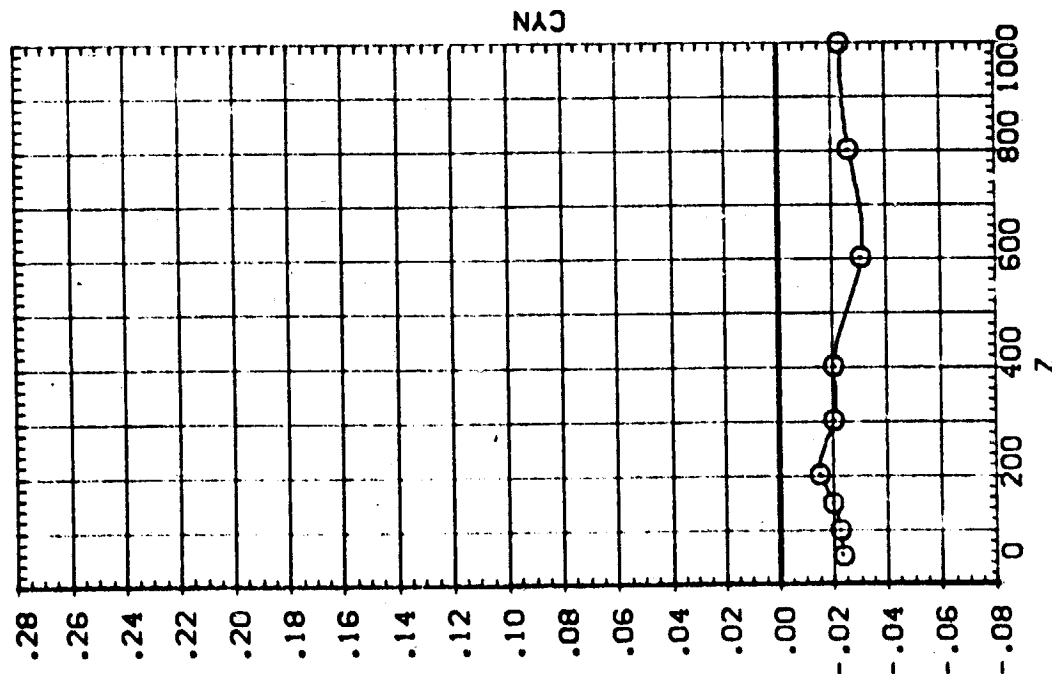


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ385)

SYMBOL
O

PARAMETRIC VALUES
MACH 4.530 PTOTAL 110.000
ALPHA .000 GETA .000
DALPHA -5.000 DBETA 5.000
Y PC-HBR .000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

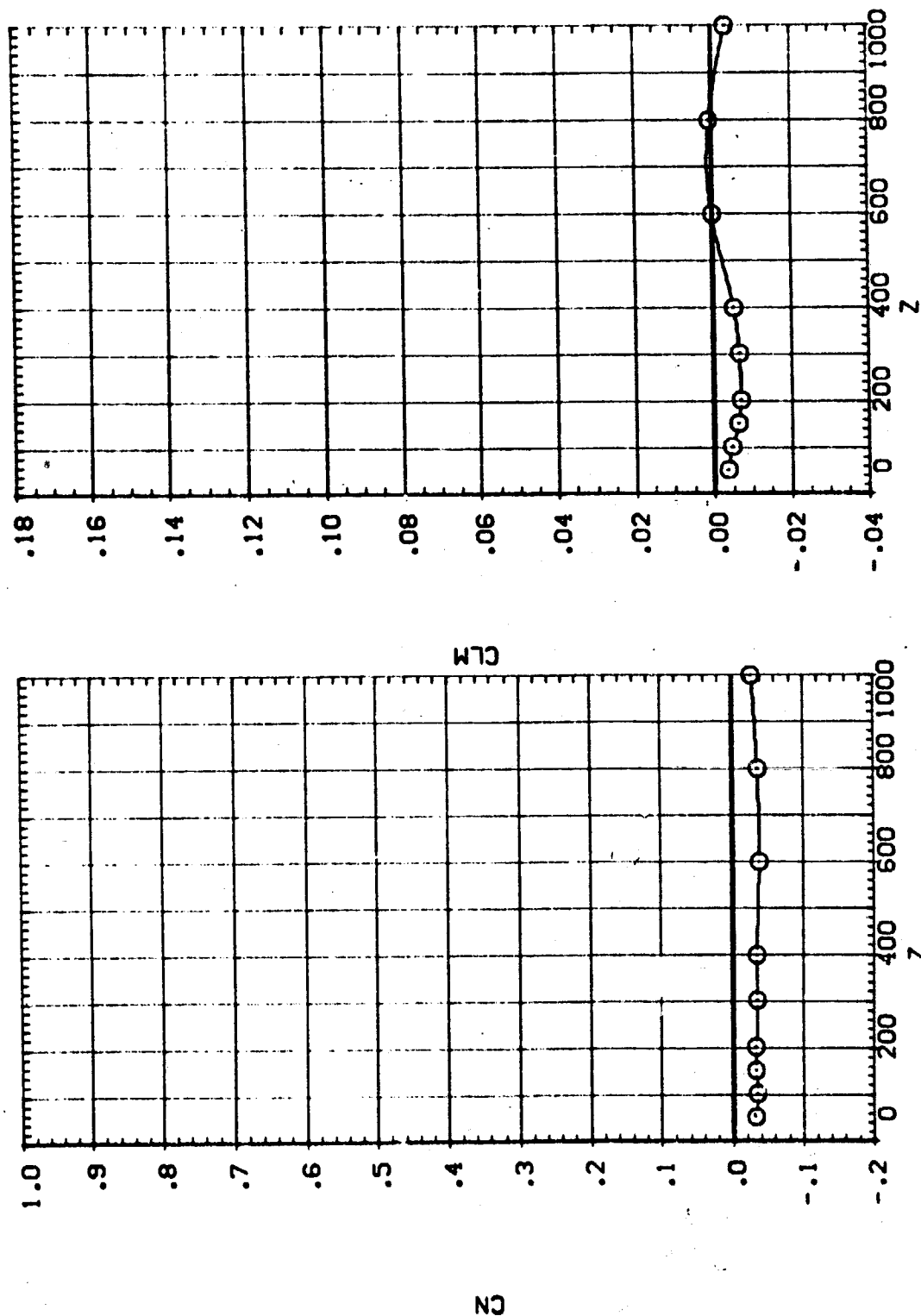


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ386)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---|-------------------|--------|---------|--|
| | | MACH | PIOTAL | 110.000 | |
| | | ALPHA | BETA | .000 | |
| | | DALPHA | DBETA | 5.000 | |
| | | Y | PC-HGR | .000 | |

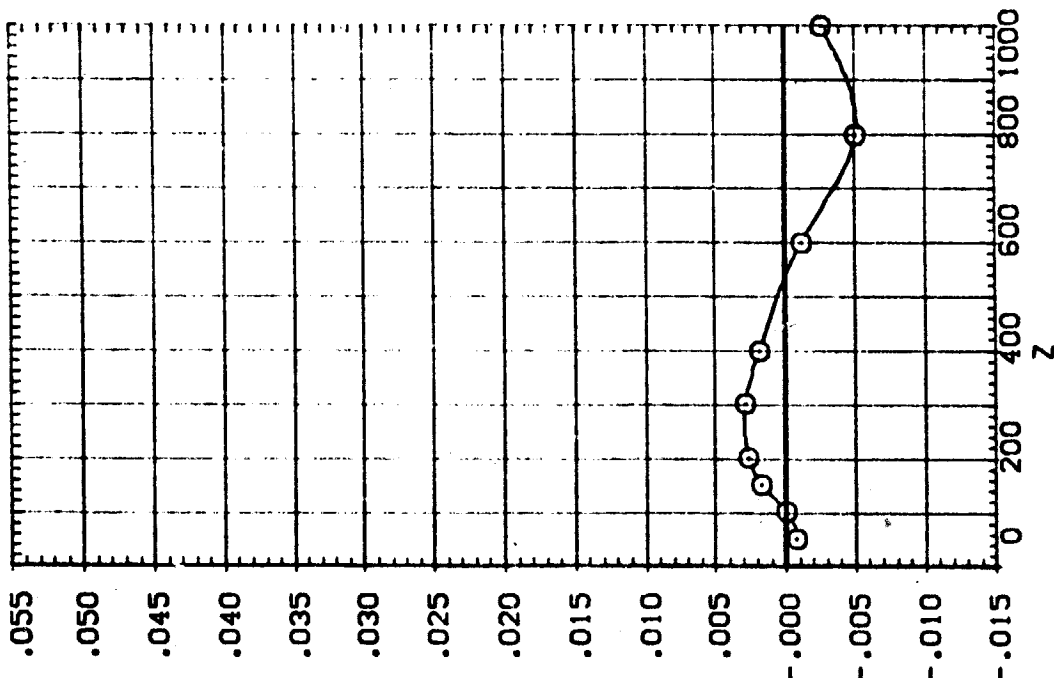
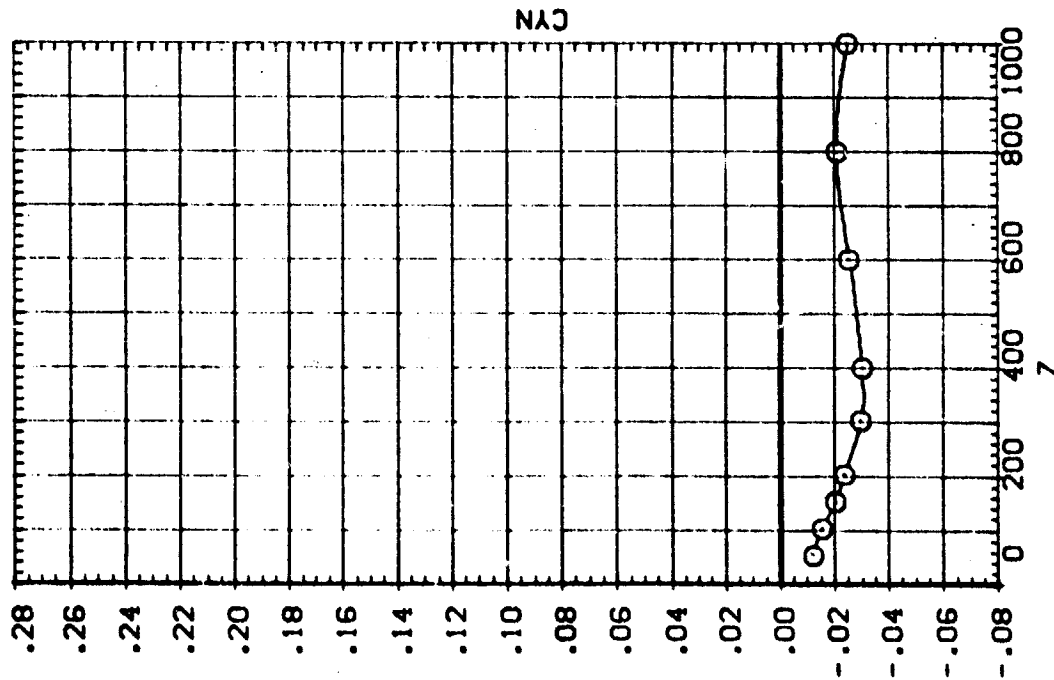


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ386)

SYMBOL
O

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALPHA -5.000 DBETA 5.000
 Y 200.000 PC-MBR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

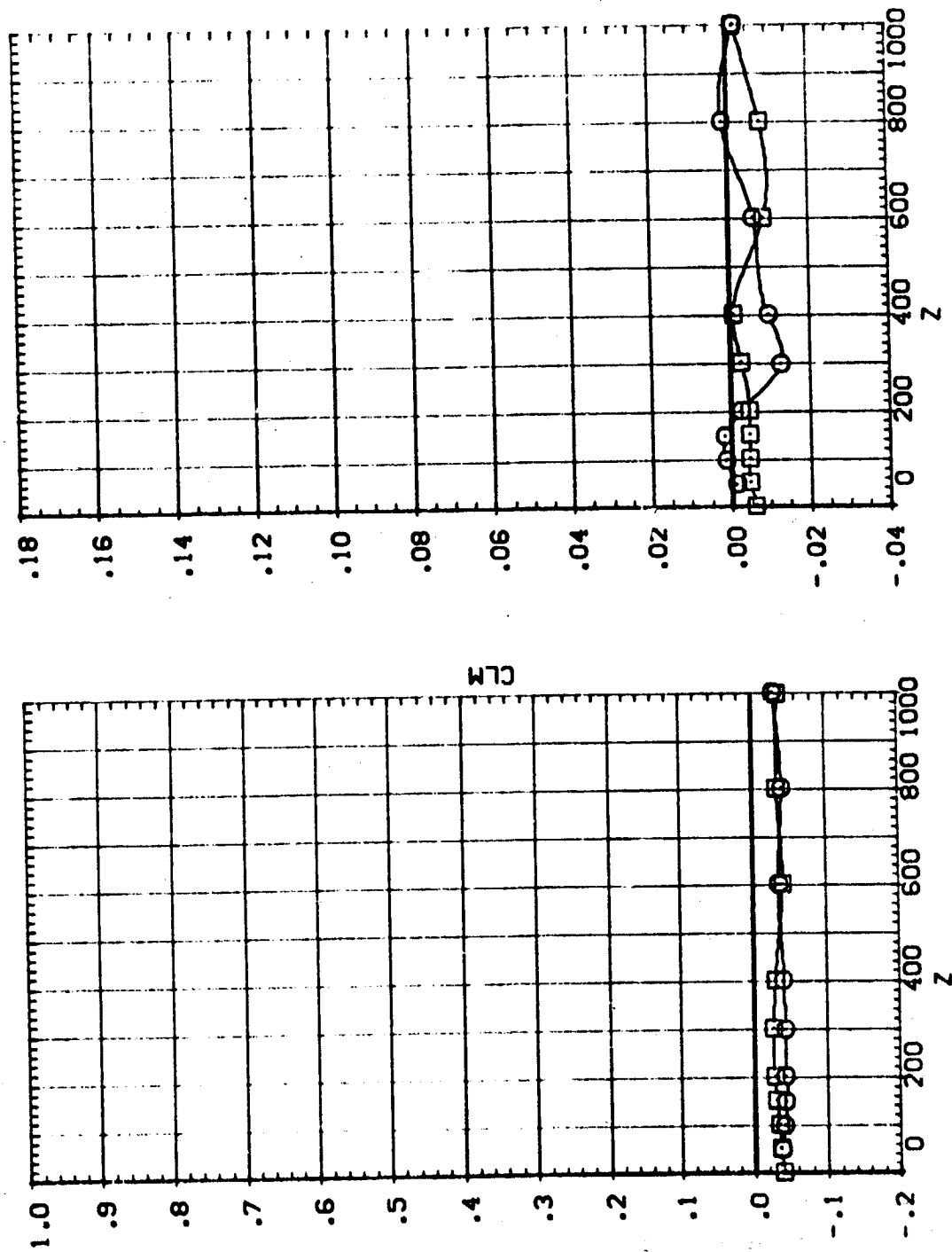


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ387)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X .013 MACH 4.530 PTOTAL 110.000
 900.650 ALPHA .000 BETA .000
 DALPHA -5.000 DBETA 5.000
 Y PCMBR .000



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ387)

SYMBOL

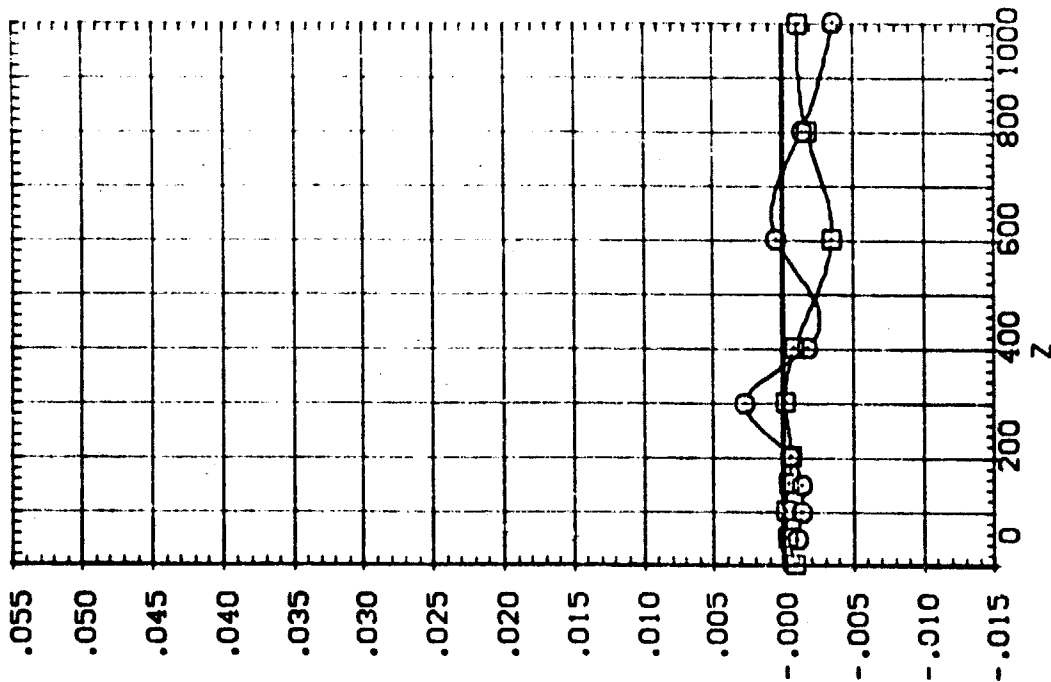
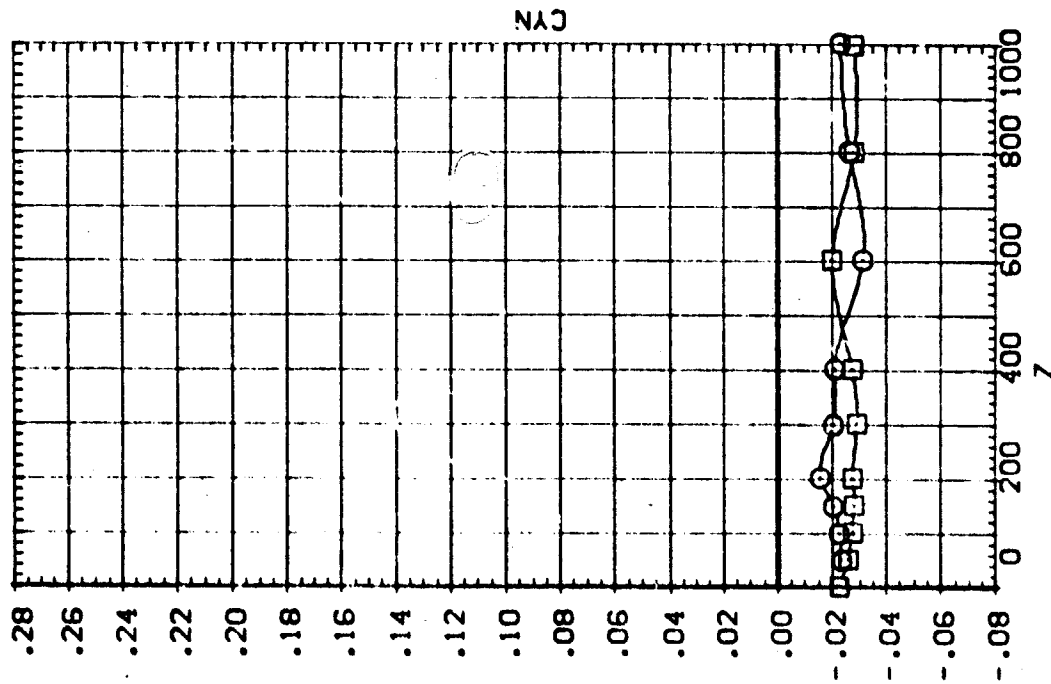
X
900.650

MACH
ALPHA
DALPHA
Y

PARAMETRIC VALUES

4.530 PTOTAL 110.000
.000 BETA .000
-5.000 DBETA 5.000
.000 PC-HSR .000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

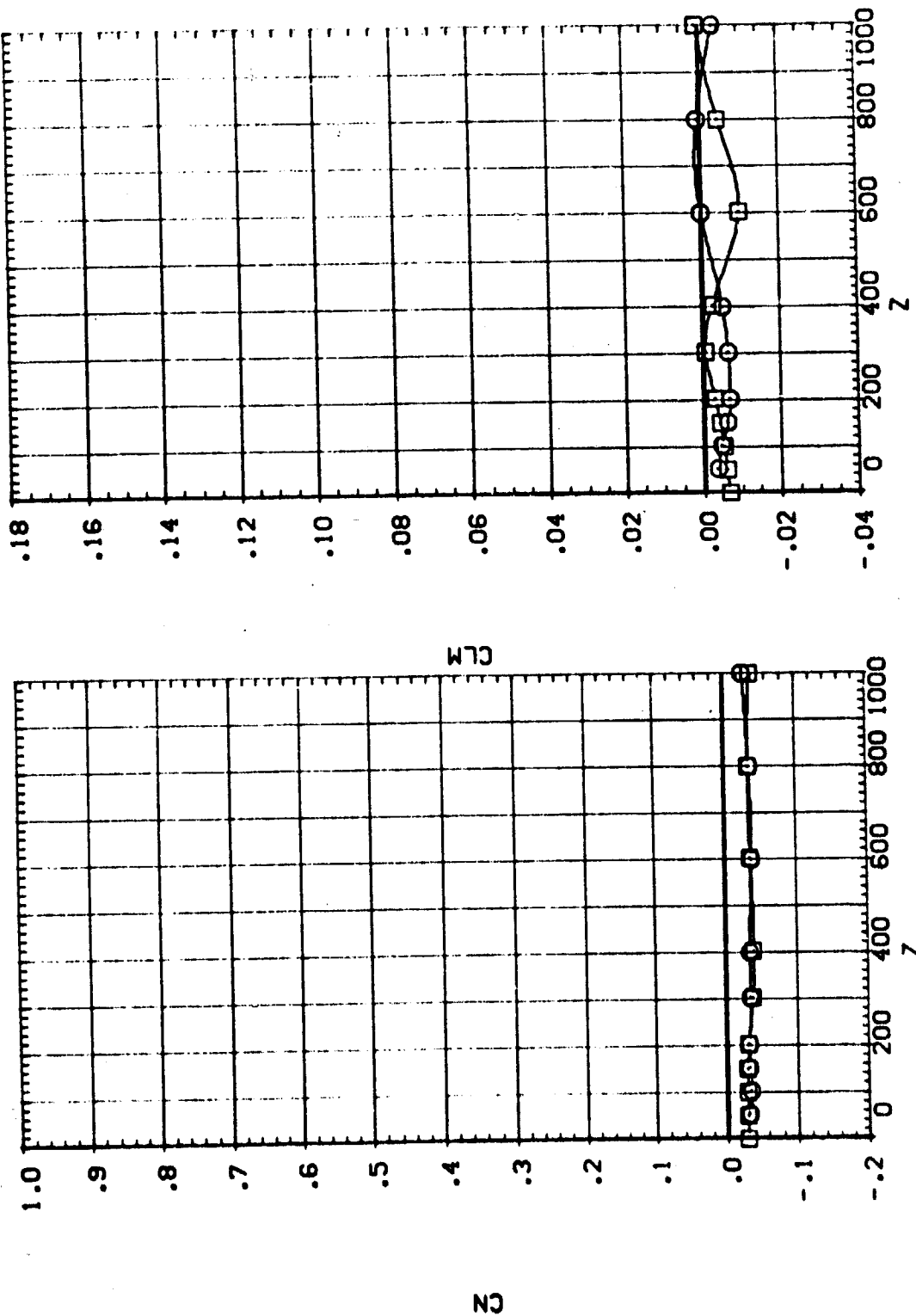


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ388)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|---------|---------|--|
| | | | 4.530 | P TOTAL | 110.000 | |
| ○ | 900.580 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | -5.000 | DBETA | 5.000 | |
| | | Y | 200.000 | PC+PR | .000 | |

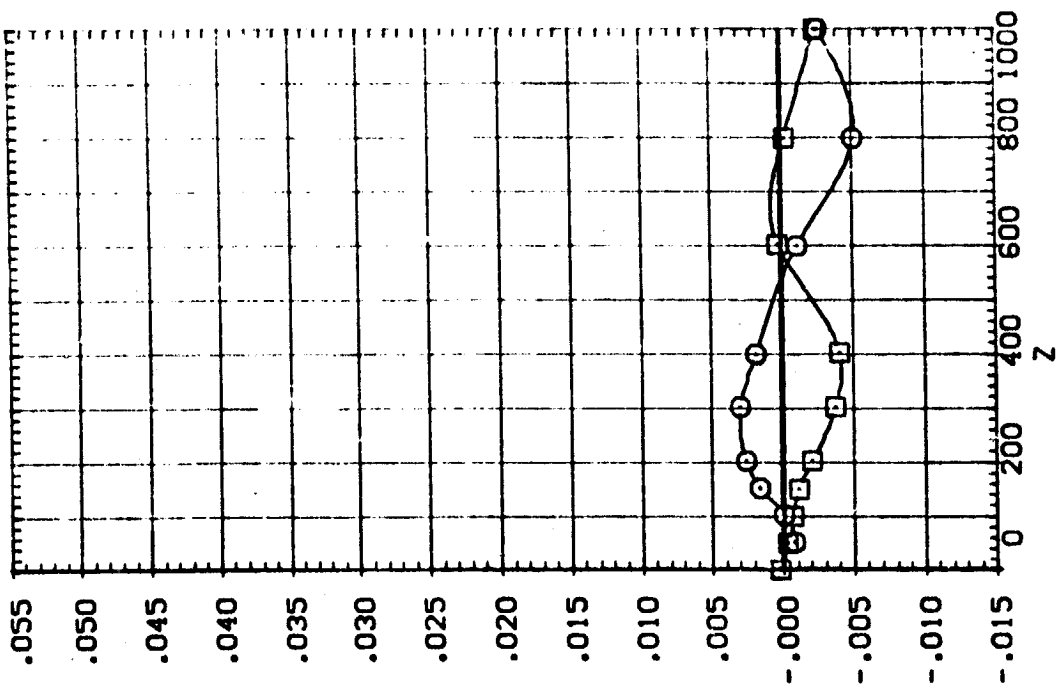
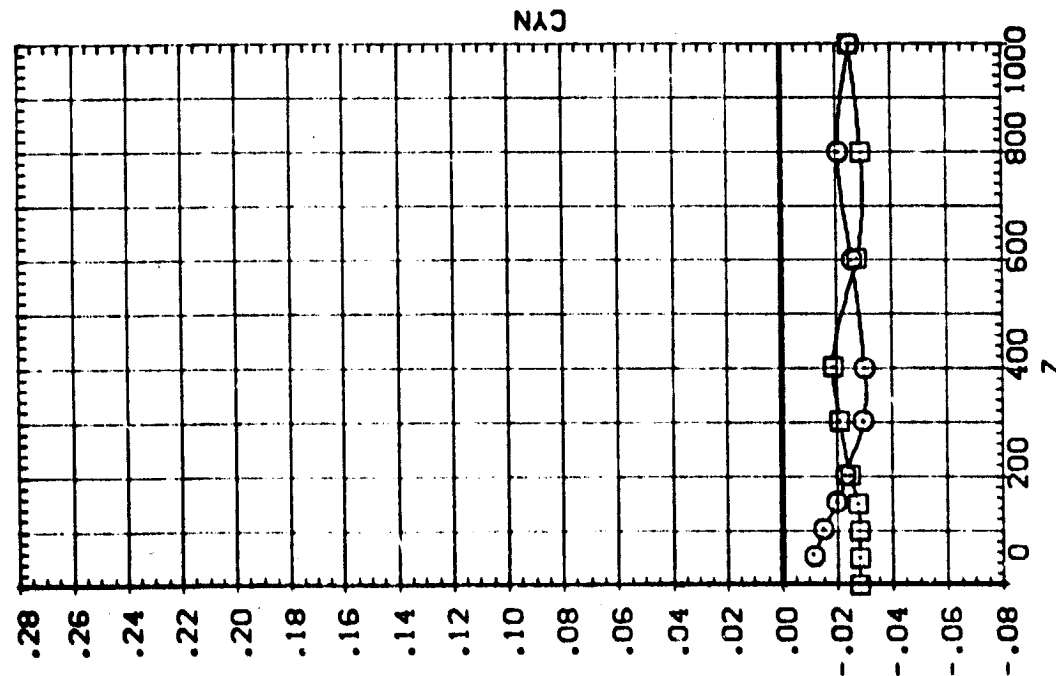


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ388)

SYMBOL X
 O
 □

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DIALPHA -5.000 DBETA 5.000
 Y 200.000 PC+R

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ389)

SYMBOL

x

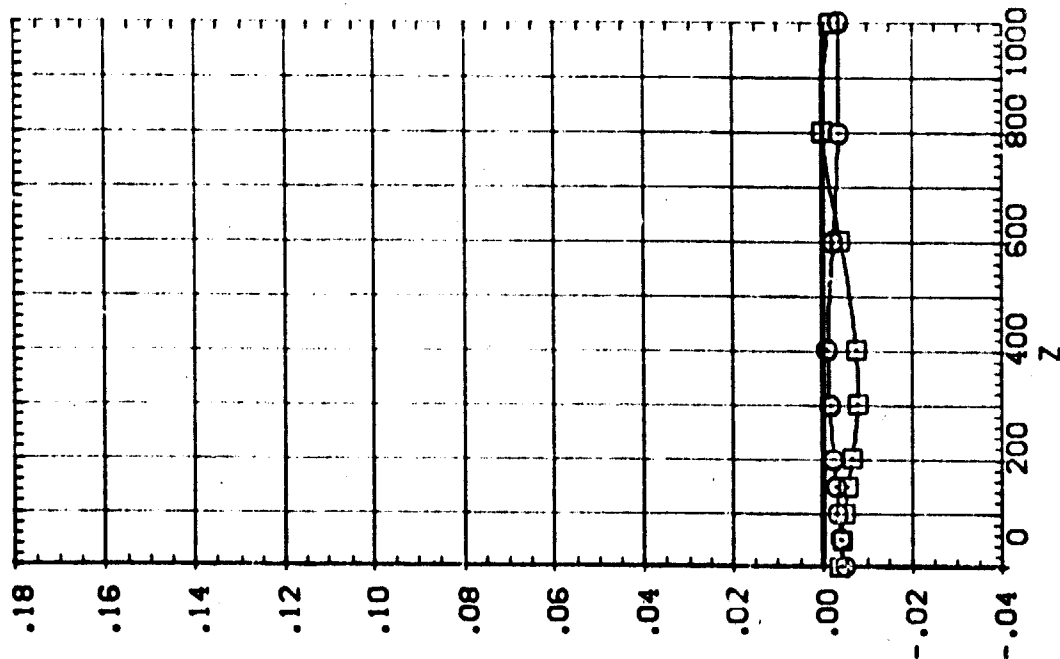
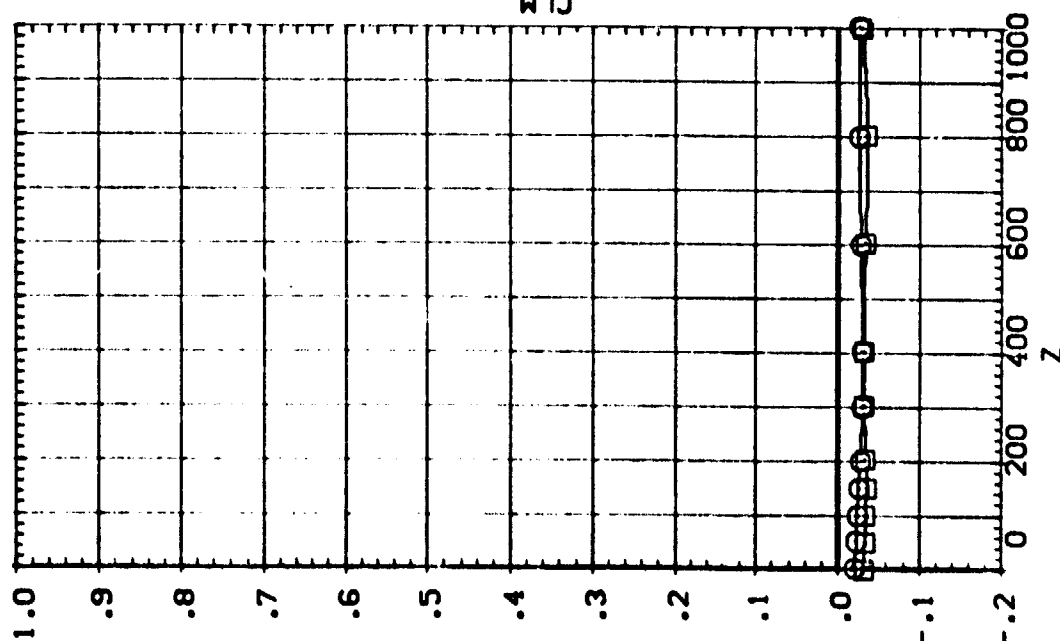
○

□

PARAMETRIC VALUES

| | | | |
|--------|---------|--------|---------|
| MACH | 4.530 | PTOTAL | 110.000 |
| ALPHA | .000 | BETA | .000 |
| DALPHA | -5.000 | DBETA | 5.000 |
| Y | 400.000 | PC-MBR | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ389)

SYMBOL

x

MACH

PARAMETRIC VALUES

PTOTAL

BETA

DBETA

PC-MBR

Y

400.000

-5.000

.000

.000

.000

.000

.000

0

0

0

0

0

0

0

0

0

0

0

0

0

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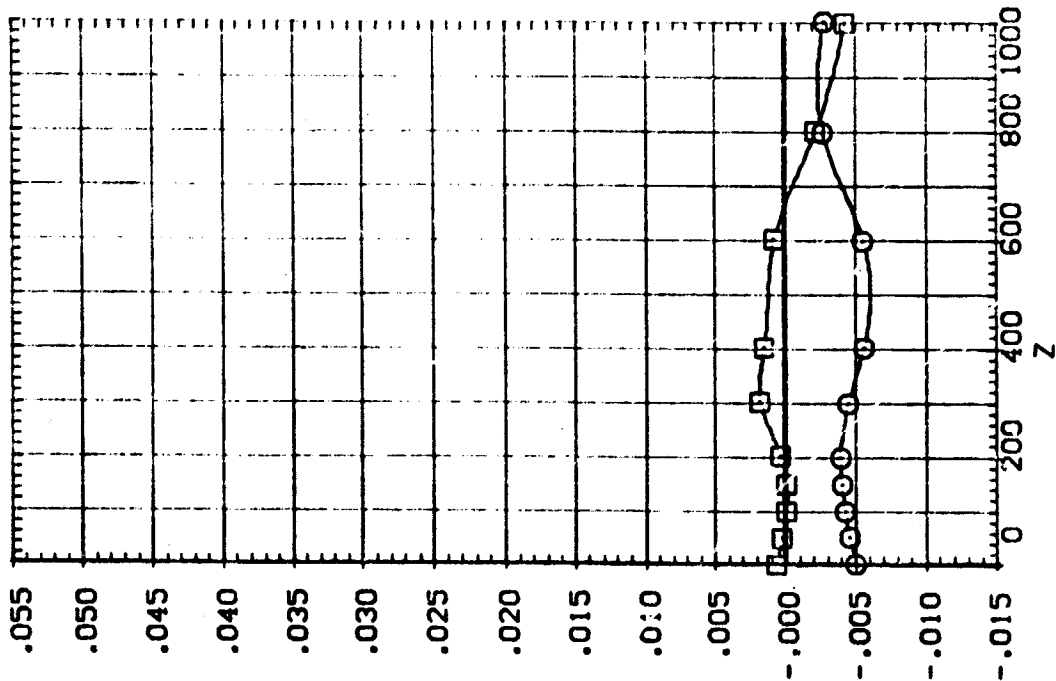
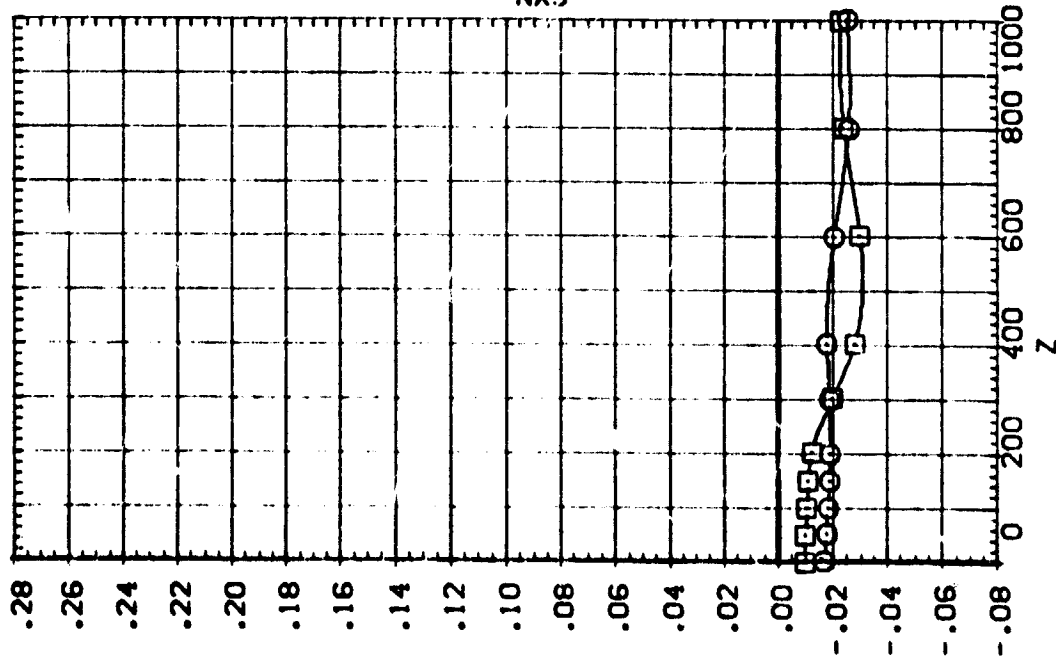
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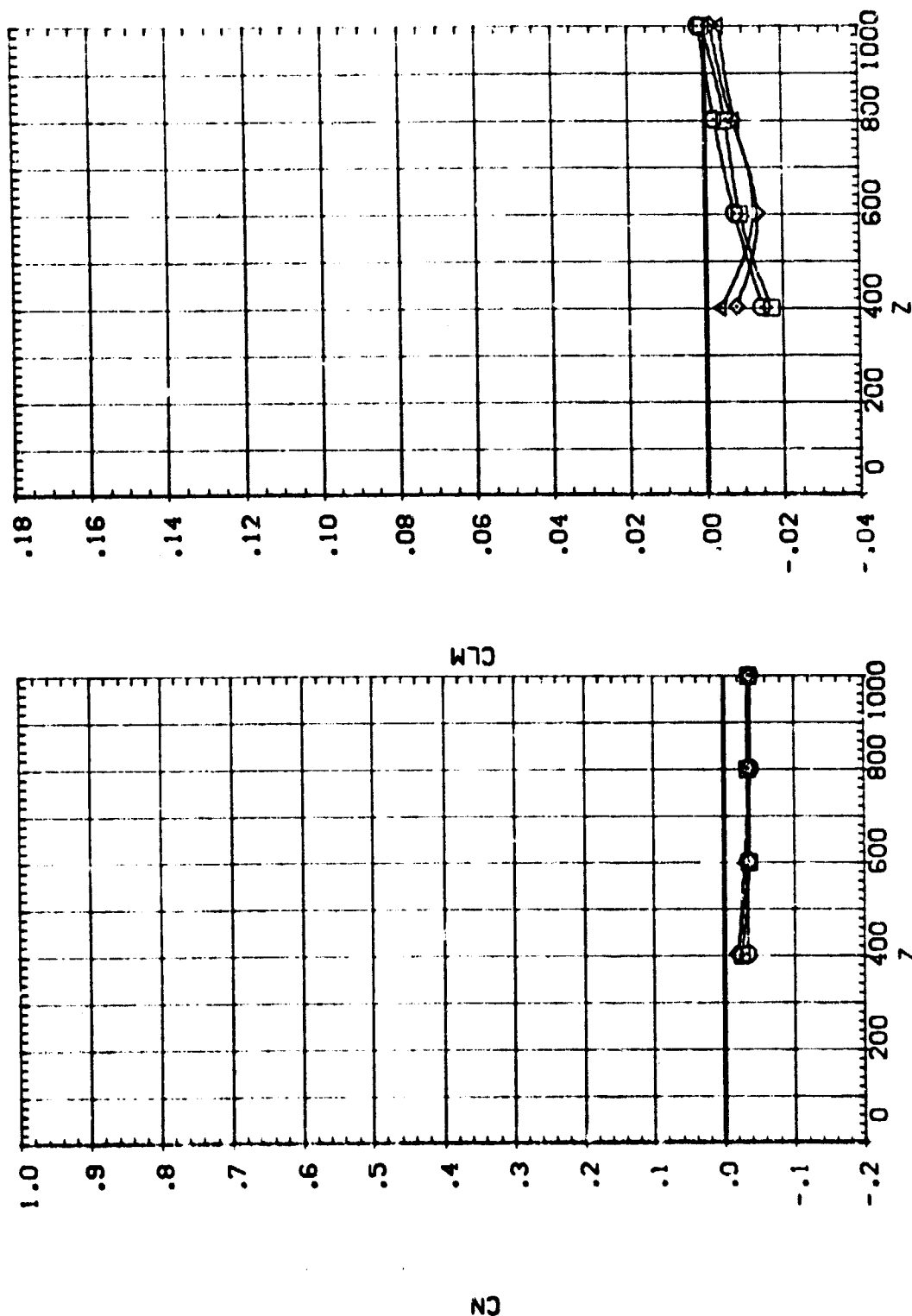
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ390)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

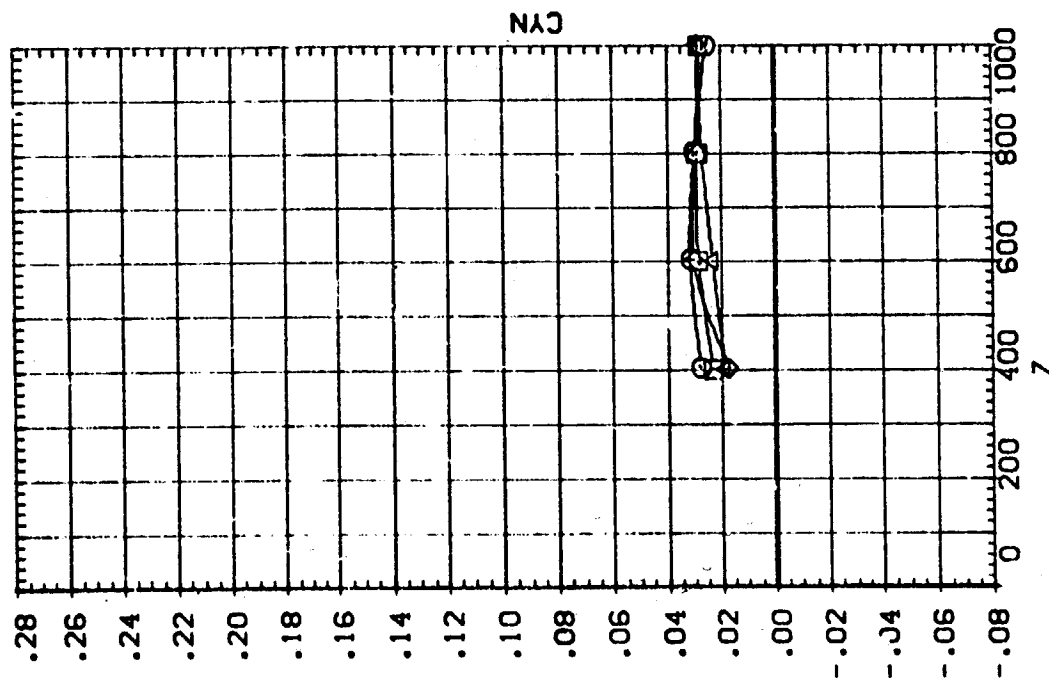
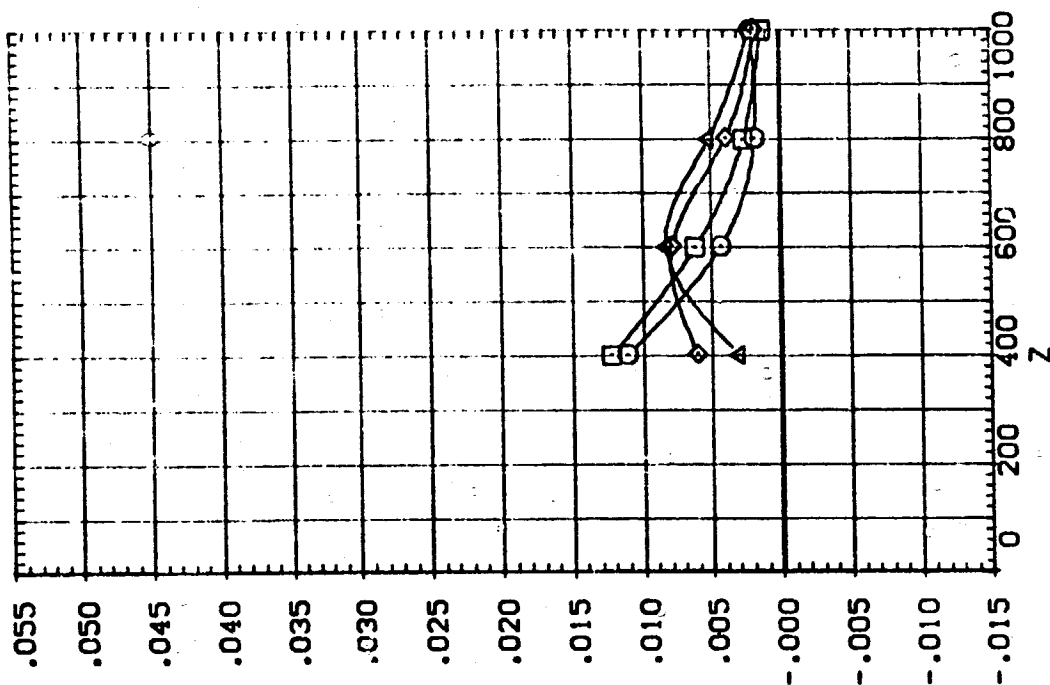
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|--------|--------|
| | | MACH | PTOTAL | BETA | DBETA | PC-MSR |
| ○ | .491 | | 110.000 | .000 | .000 | |
| □ | 300.330 | ALPHA | | -5.000 | -5.000 | |
| ◇ | 600.560 | DALPHA | | | | |
| △ | 900.500 | Y | | | | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ390)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X MACH 4.530 PYOTAL 110.000
 300.330 ALPHA .000 BETA .000
 600.560 DAPHA -5.000 DBETA -5.000
 900.500 Y .000 PC+R

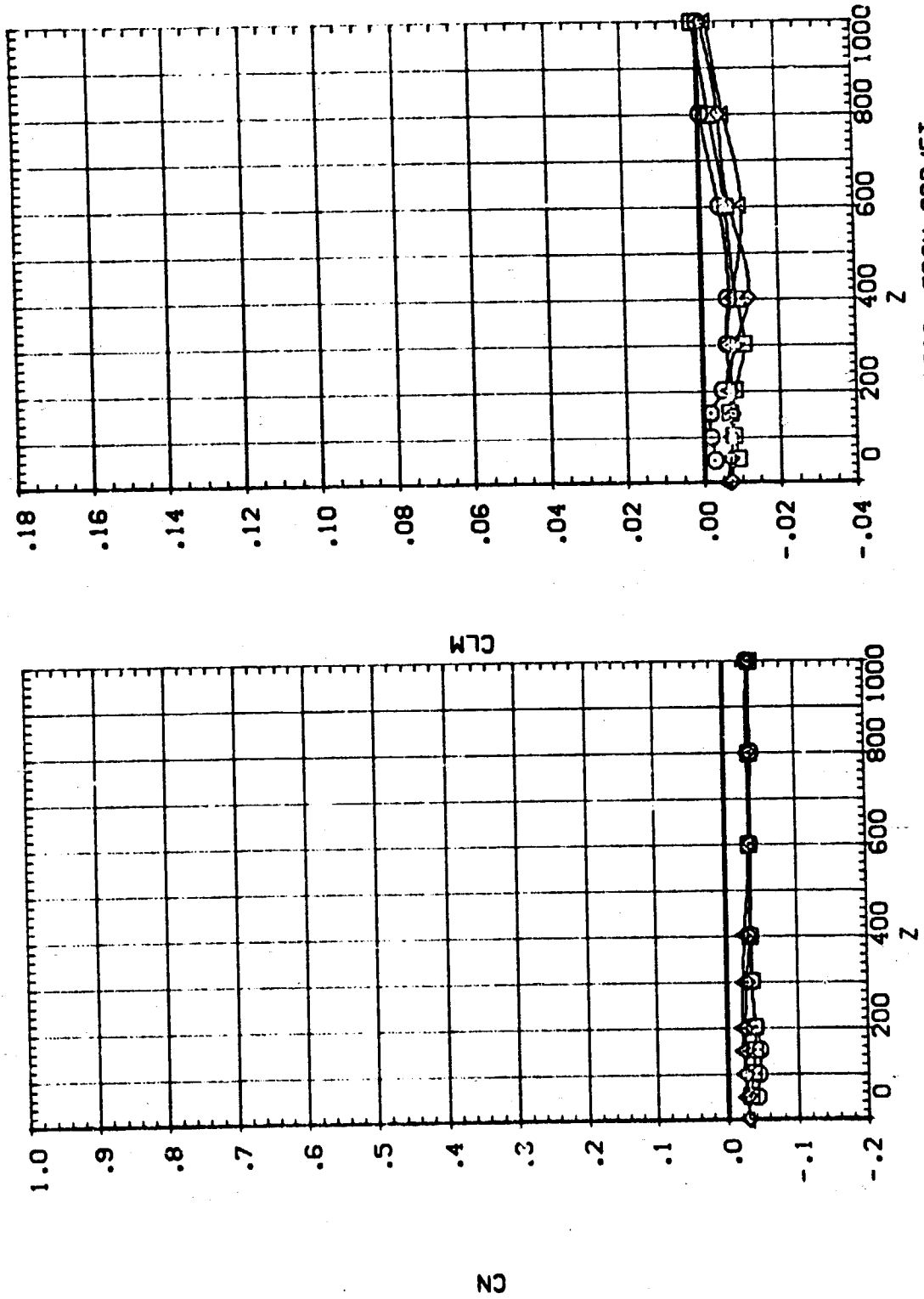


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

JA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ391)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|-------|
| | | MACH | PTOTAL | BETA | PC-HR |
| ○ | .324 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.230 | .000 | BETA | -5.000 | .000 |
| ◇ | 600.570 | DALPHA | 200.000 | PC-HR | |
| △ | 900.600 | Y | | | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ391)

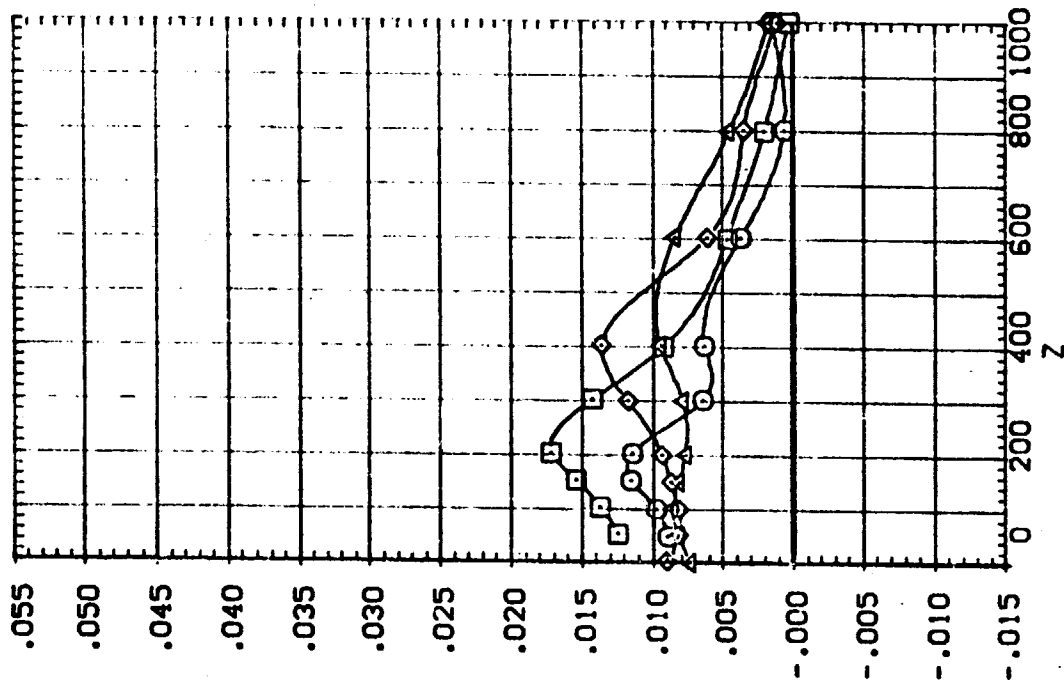
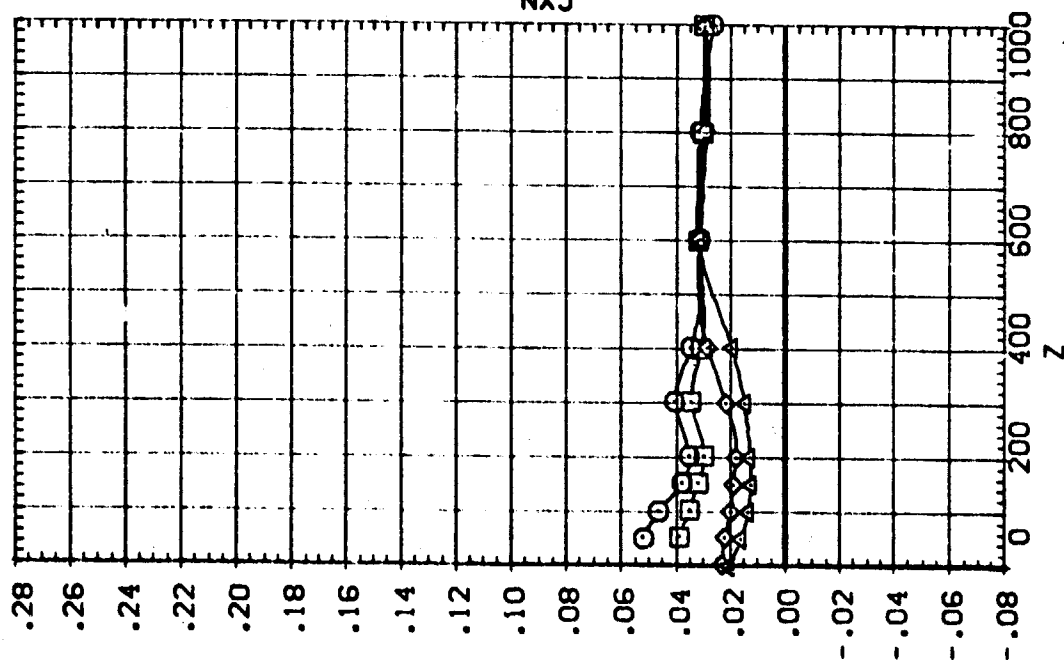
SYMBOL

○
 □
 ◇
 △

PARAMETRIC VALUES

.324 MACH
 300.230 ALPHA
 600.570 DALPHA
 900.600 Y
 4.530 PTOTAL
 .000 BETA
 -5.000 DBETA
 200.000 PCMBR
 110.000
 .000
 -5.000
 .000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

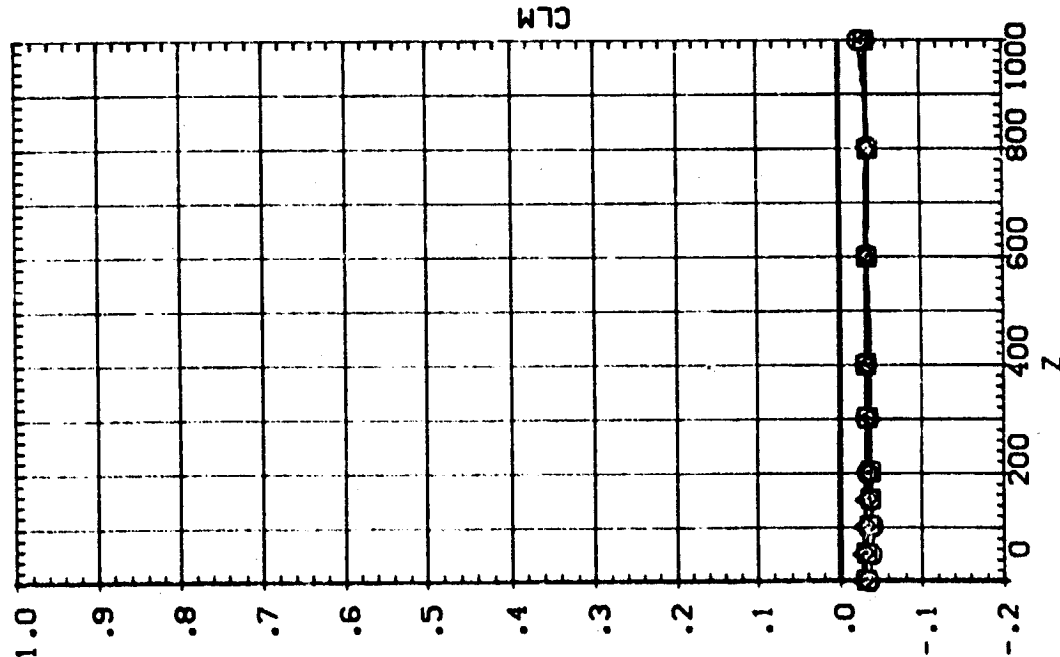
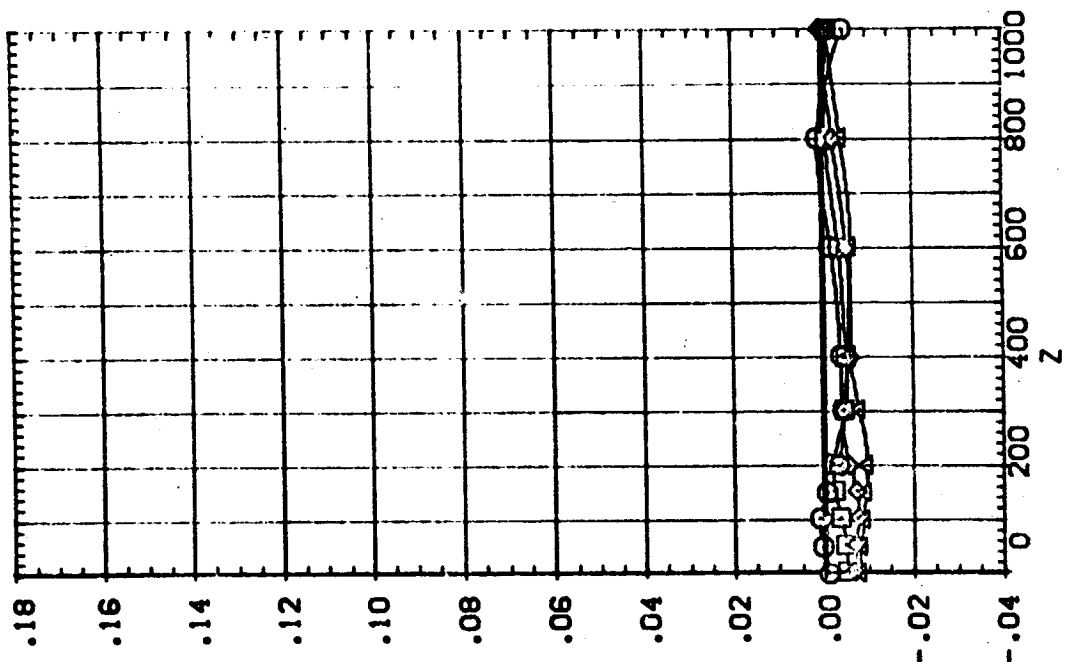


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ392)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|---------|
| | | MACH | 4.530 | PITOTAL | 110.000 |
| ○ | 300.490 | ALPHA | .000 | BETA | .000 |
| □ | 600.480 | DALPHA | -5.000 | DBETA | -5.000 |
| ◇ | 900.610 | Y | 400.000 | PC-HSR | .000 |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ392)

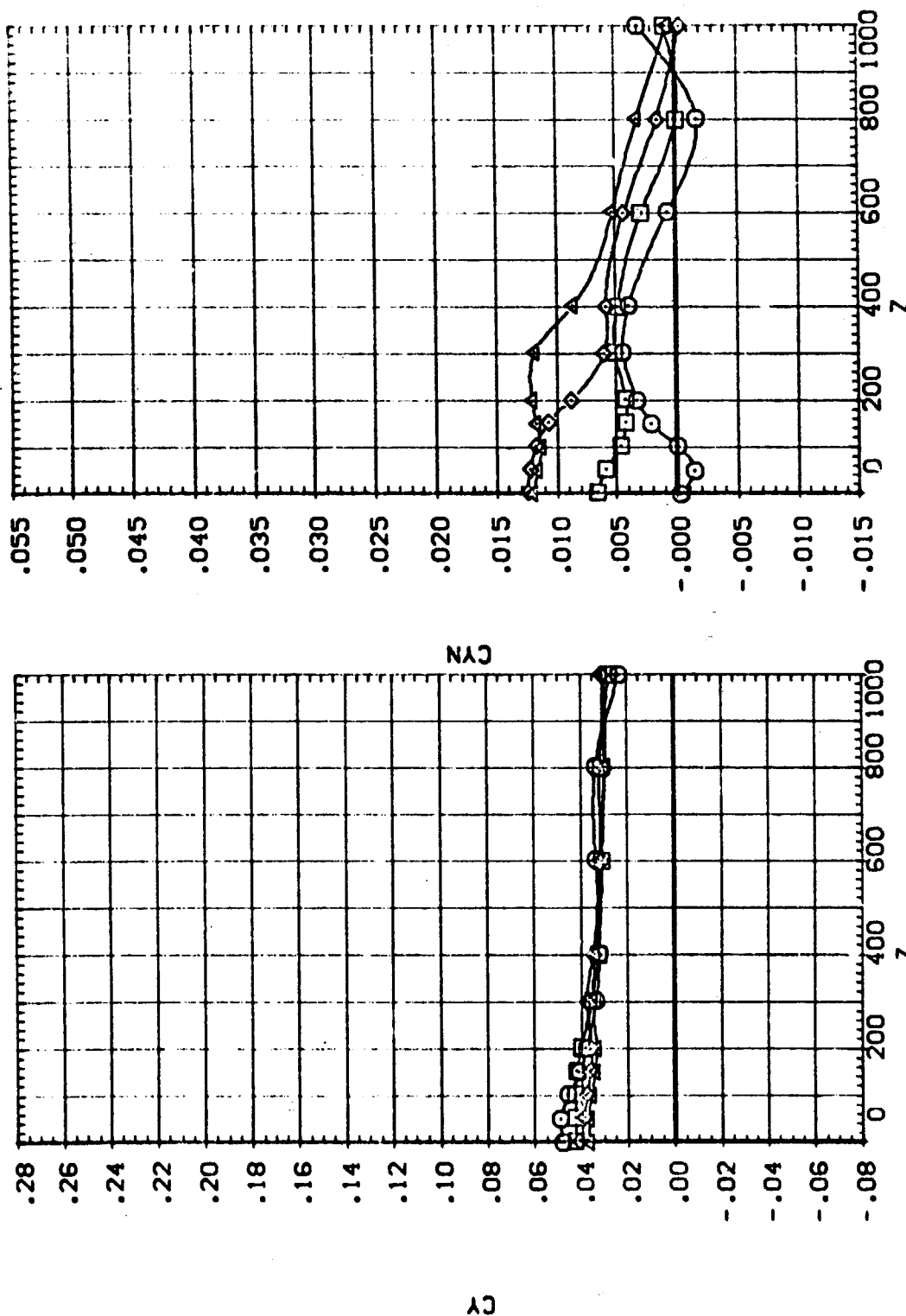
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PIOTAL | BETA | DBETA | PC-MER |
|---------|--------|---------|--------|--------|--------|
| 300.490 | .325 | 4.530 | .000 | .000 | |
| 500.480 | ALPHA | .000 | BETA | .000 | |
| 900.610 | DALPHA | -5.000 | DBETA | -5.000 | |
| | V | 400.000 | PC-MER | .000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

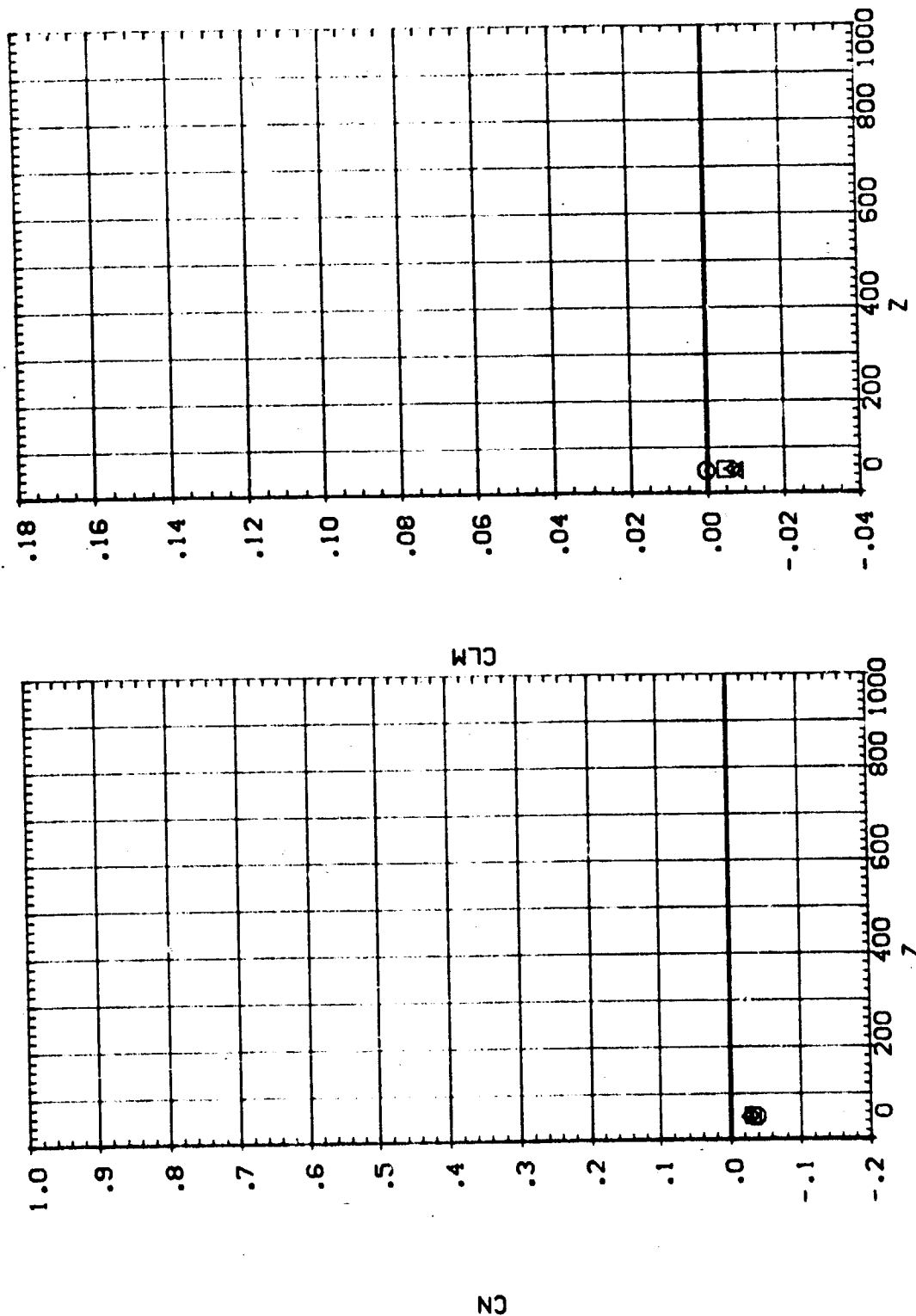


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ393)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

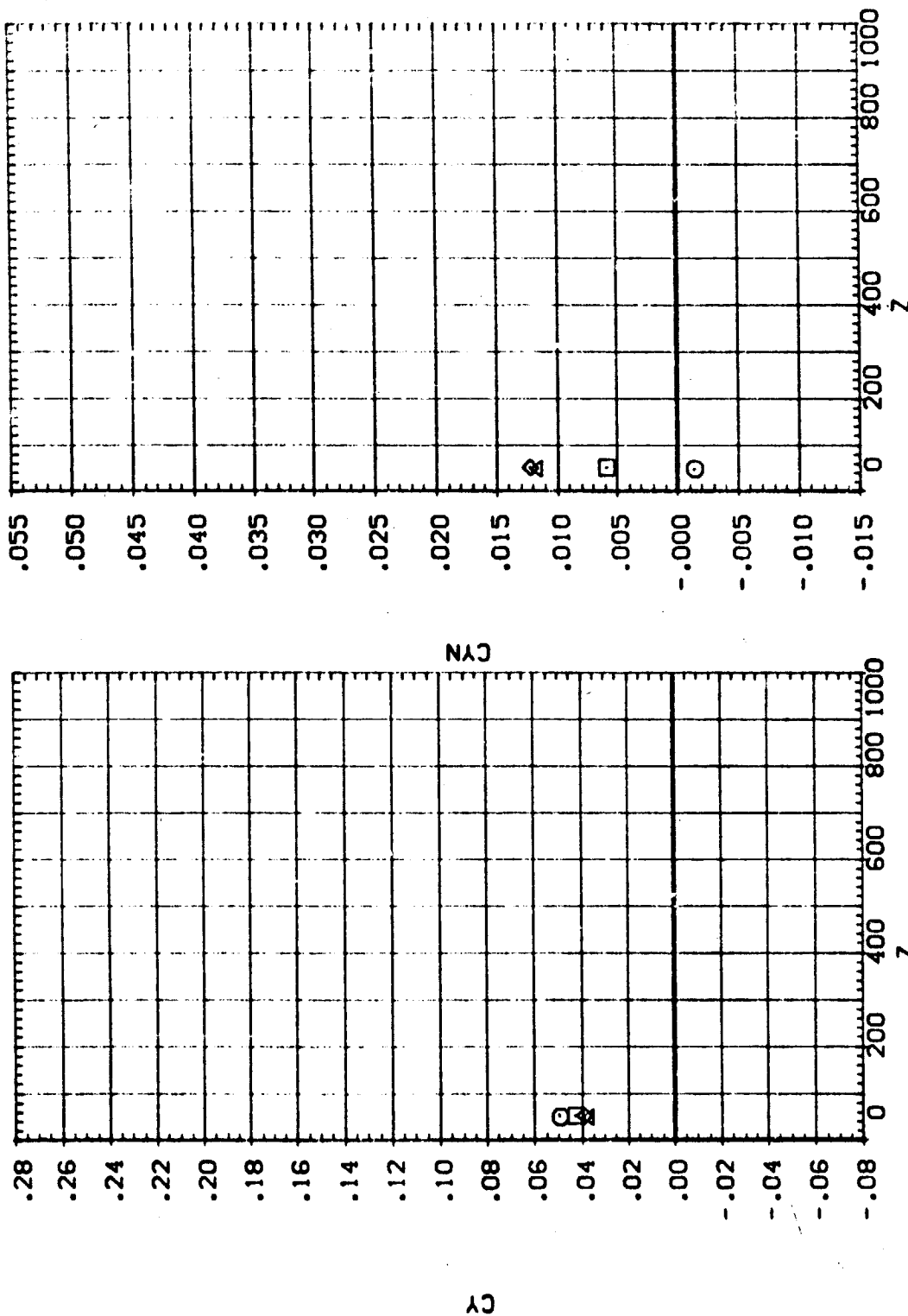
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | 300.300 | ALPHA | .000 | BETA | .000 |
| □ | 600.560 | DALPHA | -5.000 | DBETA | -5.000 |
| ◇ | 900.570 | Y | 800.000 | PC-MBR | .000 |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ393)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .375 | 4.530 | TOTAL 110.000 |
| □ | 300.300 | .000 | BETA .000 |
| ◇ | 600.560 | -5.000 | DBETA -5.000 |
| △ | 900.570 | 800.000 | PC-HSR .000 |

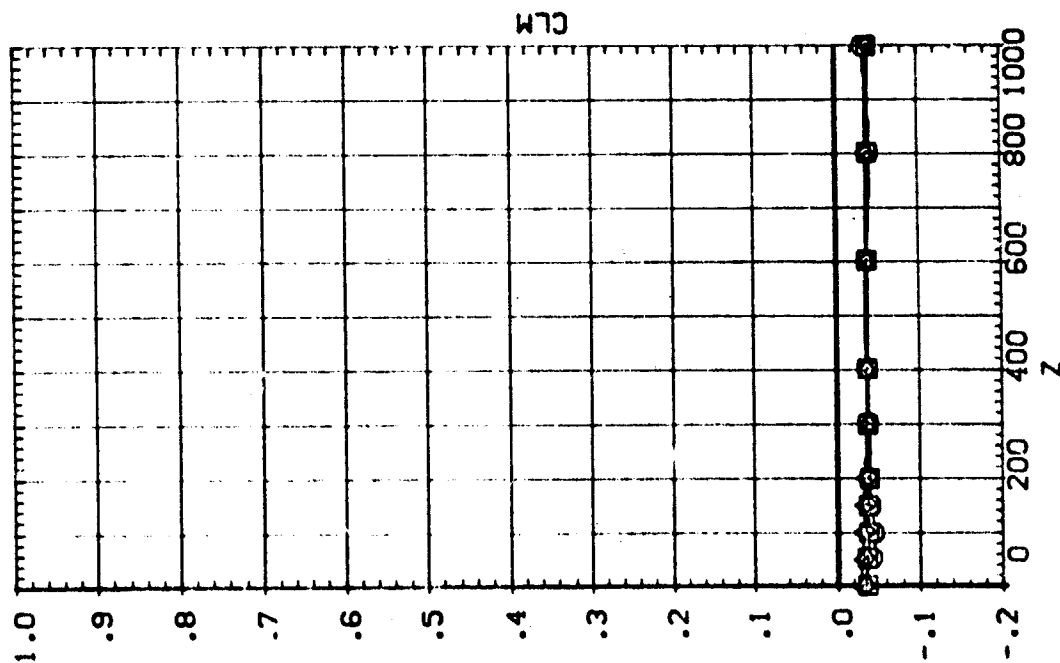
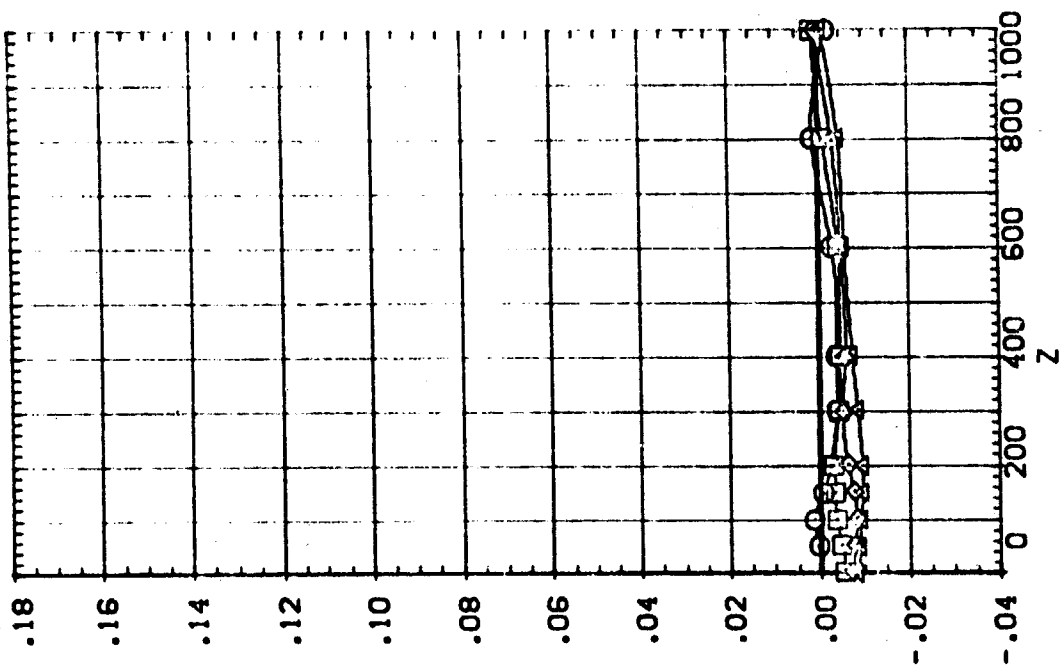


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ395)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|----------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| □ | 300.4110 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.650 | DALPHA | -5.000 | DBETA | -10.000 |
| △ | 900.650 | Y | 400.000 | PC-MR | .000 |

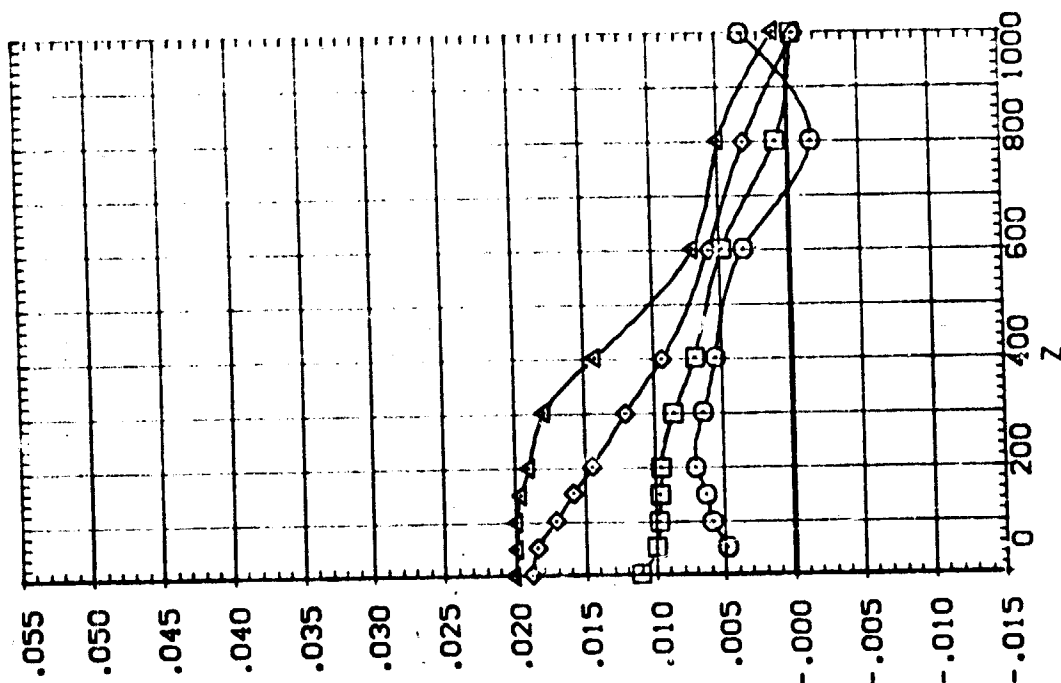
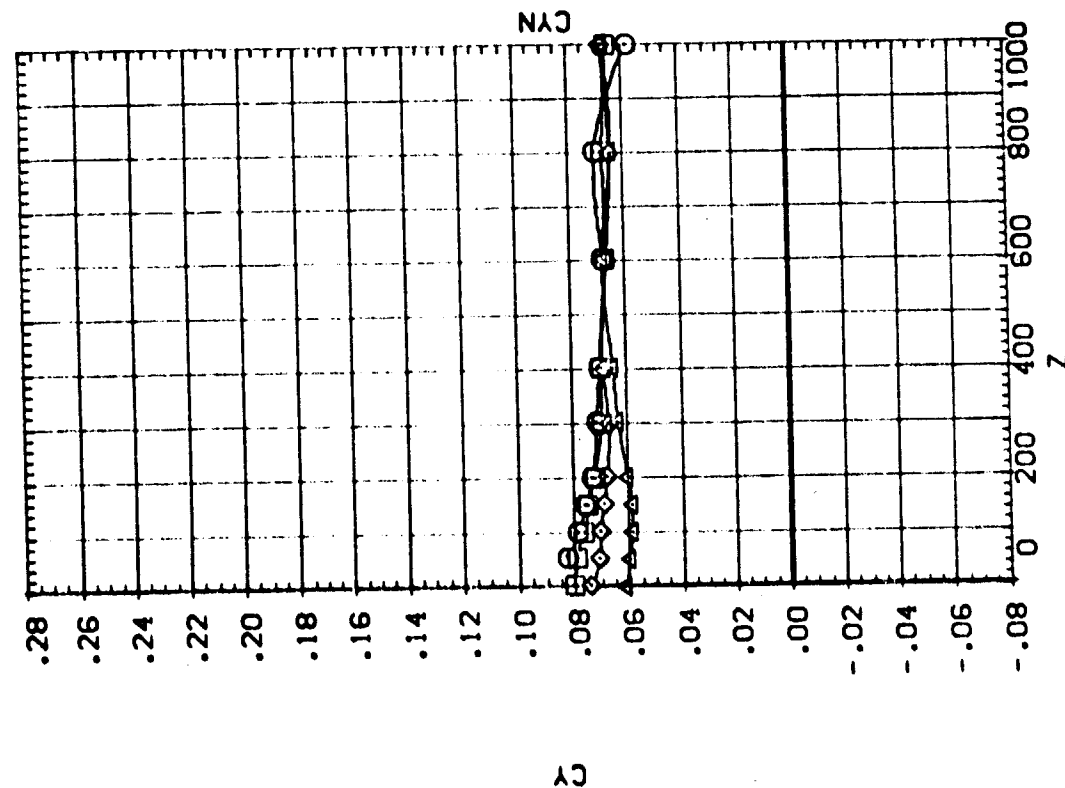


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09110 (RIJ395)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH TOTAL 110.000
300.410 ALPHA .000 BETA .000
600.650 DALPHA -5.000 DBETA -10.000
900.650 Y 400.000 PC-MBR .000

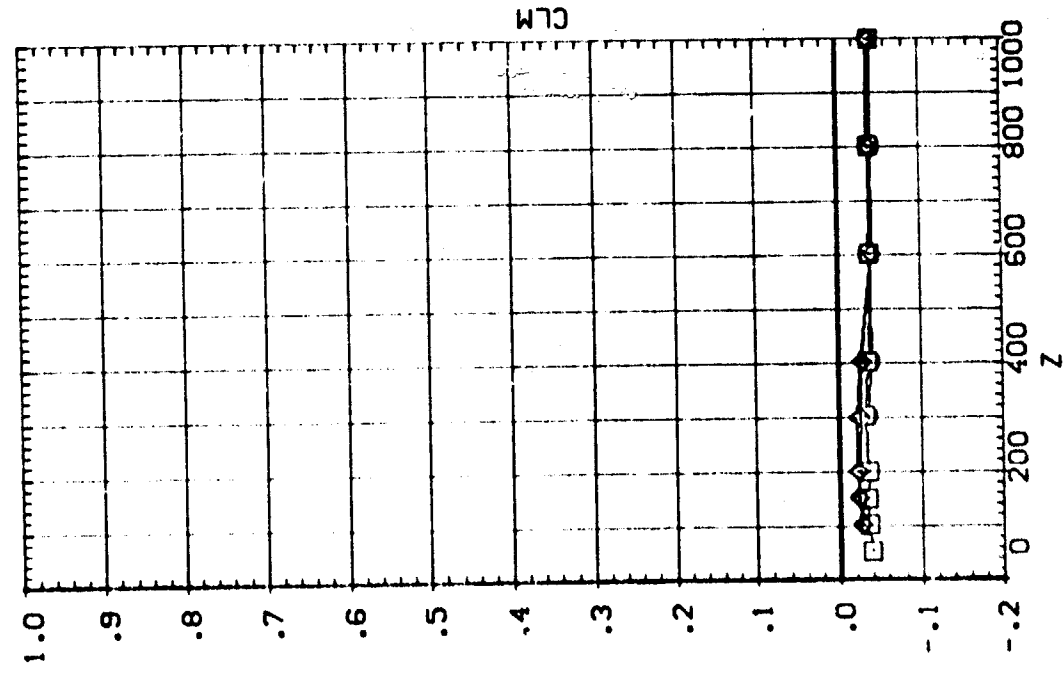
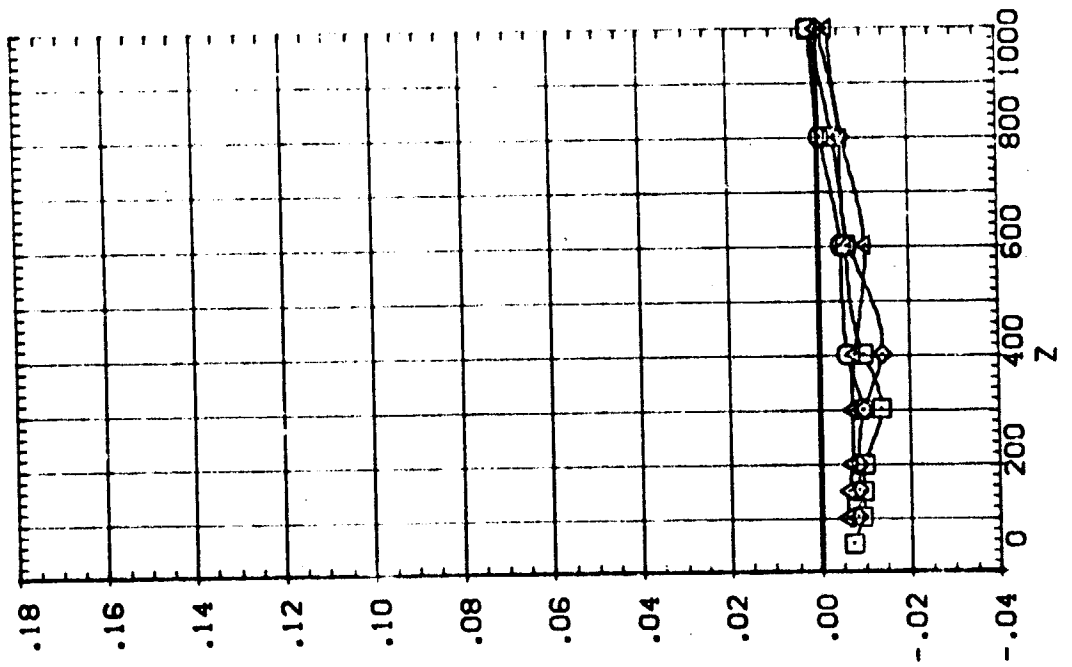


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET
PAGE 1004

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ396)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMB. | X | PARAMETRIC VALUES | | | |
|-------|---------|-------------------|---------|--------|---------|
| | | MACH | PTOTAL | BETA | DBETA |
| □ | .321 | 4.530 | 110.000 | .000 | .000 |
| ◇ | 300.410 | .000 | BETA | -5.000 | -10.000 |
| △ | 600.470 | 200.000 | PCHMR | .000 | .000 |
| | 900.250 | | | | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ396)

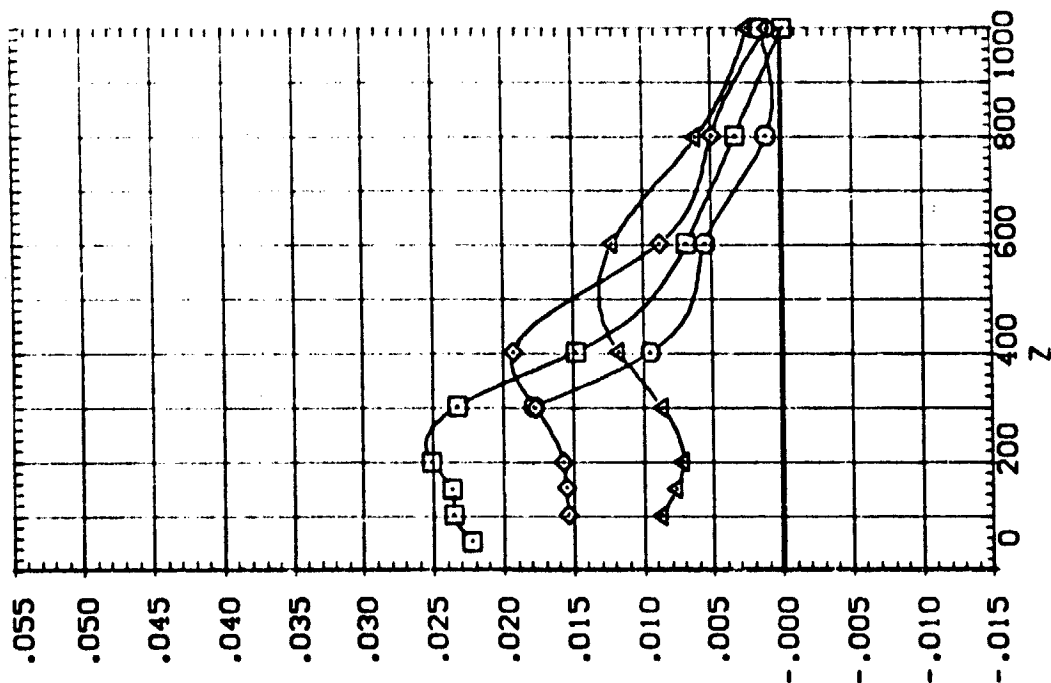
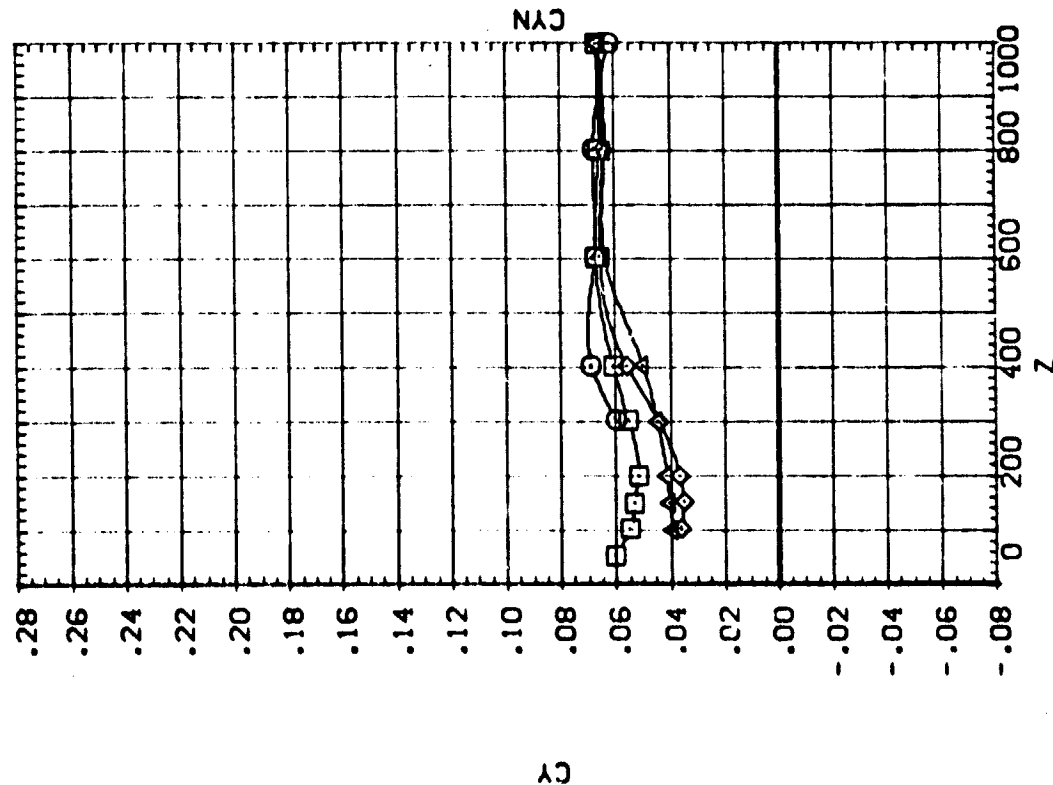
SYMBOL

○
□
◇
△

PARAMETRIC VALUES

| | MACH | PIOTAL | BETA | DBETA | PC-H8R |
|---------|--------|---------|--------|---------|---------|
| 300.410 | .32 | 4.530 | .000 | .000 | 110.000 |
| 600.470 | ALPHA | .000 | BETA | .000 | |
| 900.250 | DALPHA | -5.000 | DBETA | -10.000 | |
| | Y | 200.000 | PC-H8R | .000 | |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



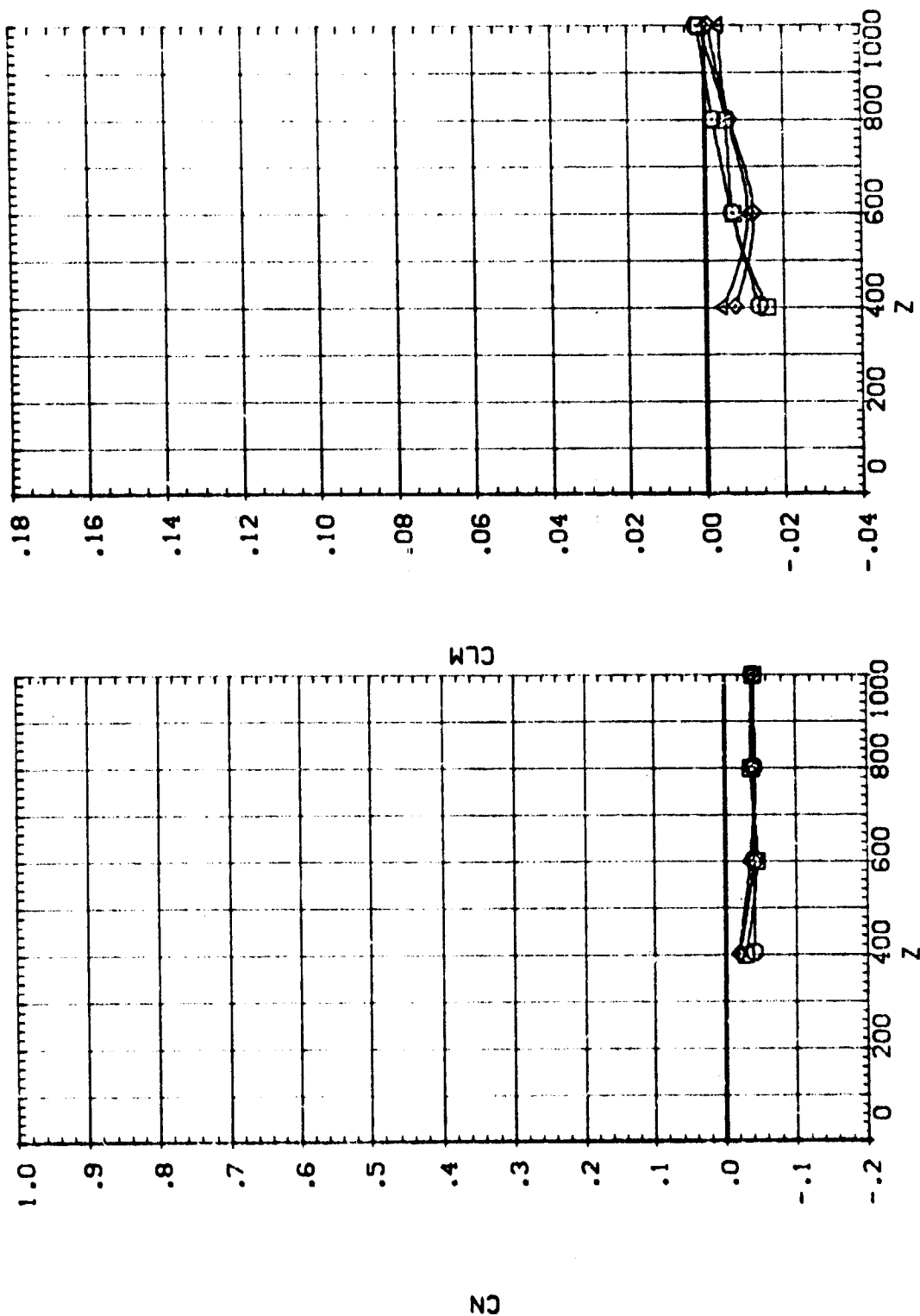
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ397)

SYMBOL
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 X MACH TOTAL 110.000
 300.090 ALPHA .000 BETA .000
 600.550 DELTA -5.000 DBETA -10.000
 900.440 Y .000 PCMBR .000

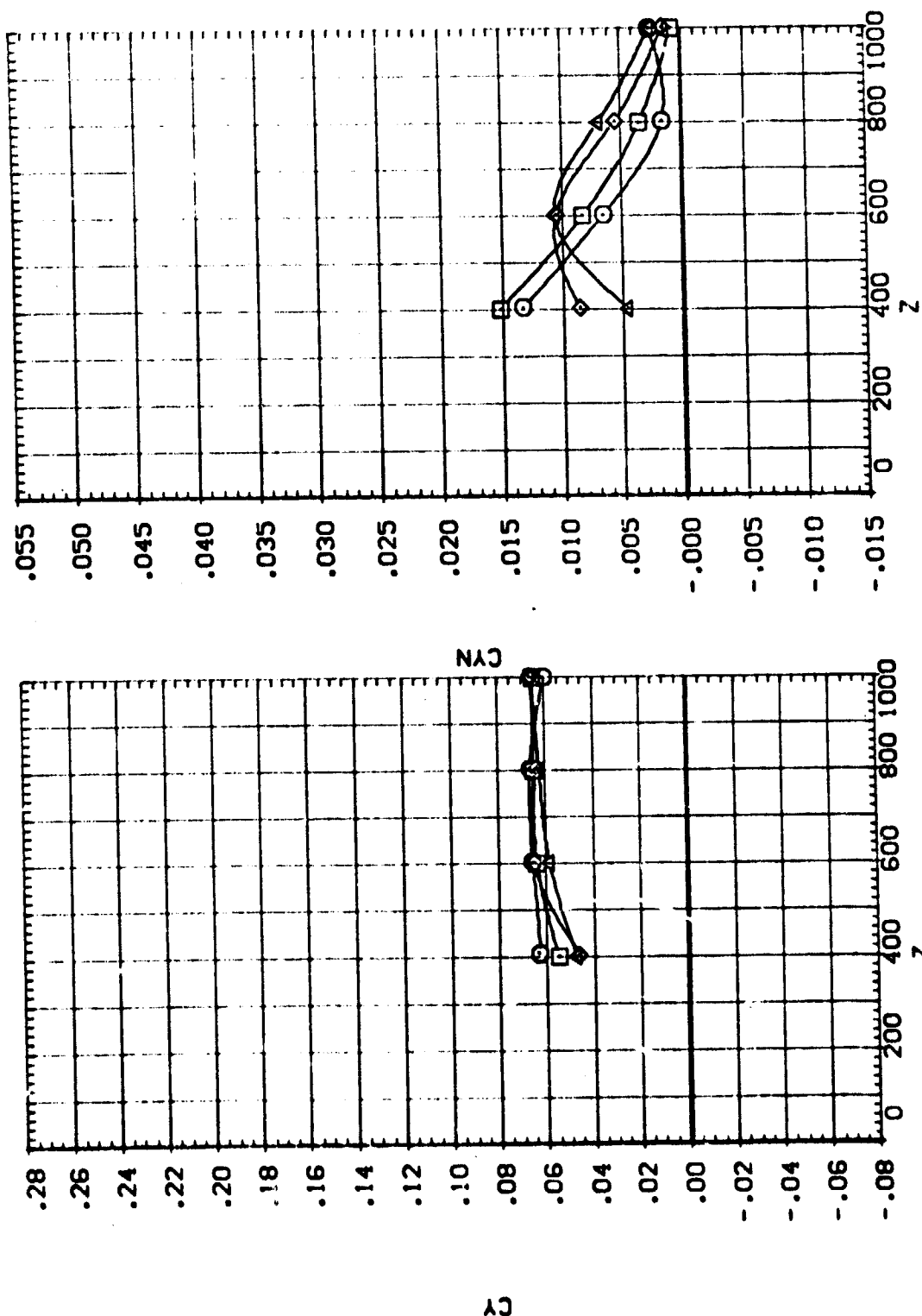
ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ397)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|--------|---------|--|
| | | MACH | 4.530 | PIOTAL | 110.000 | |
| ○ | 300.090 | ALPHA | .000 | BETA | .000 | |
| □ | 600.550 | DALPHA | -5.000 | DBETA | -10.000 | |
| ◇ | 900.440 | Y | .000 | PC-MBR | .000 | |

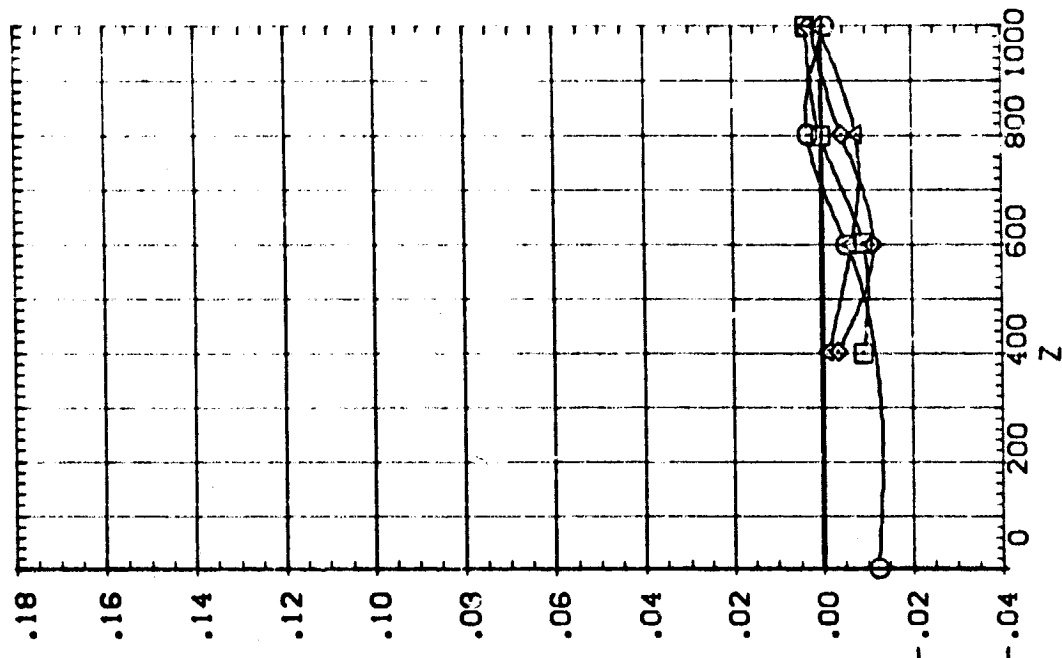
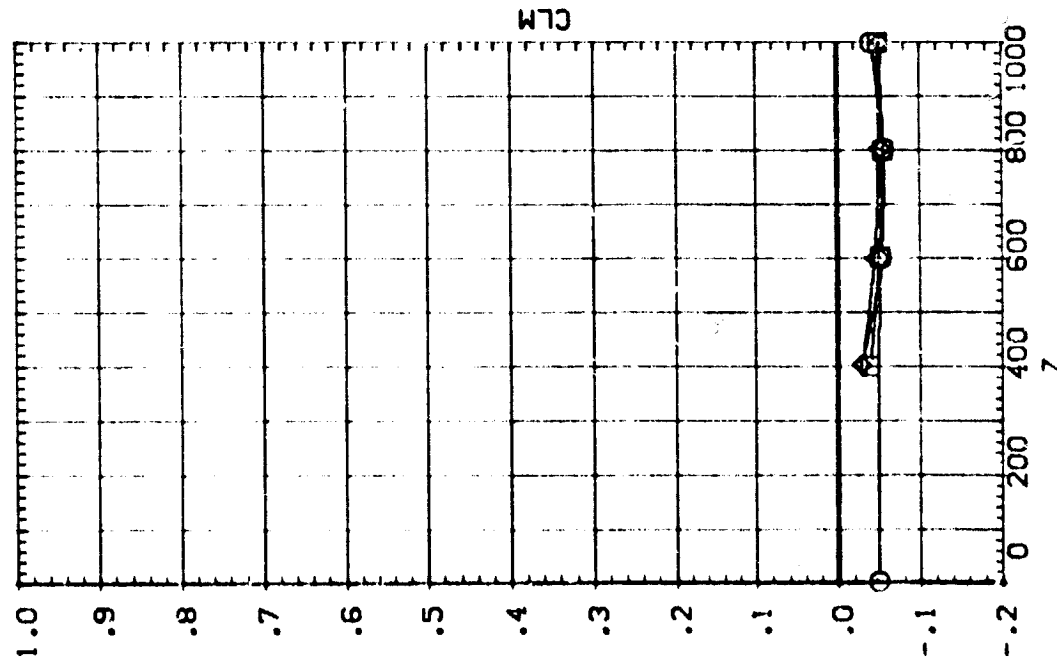


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ398)

SYMBOL X MACH PARAMETRIC VALUES
 300.380 .000 4.530 PTOTAL 110.000
 600.820 .000 .000 .000 BETA .000
 900.820 .000 .000 .000 DBETA -20.000
 PC-HR .000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

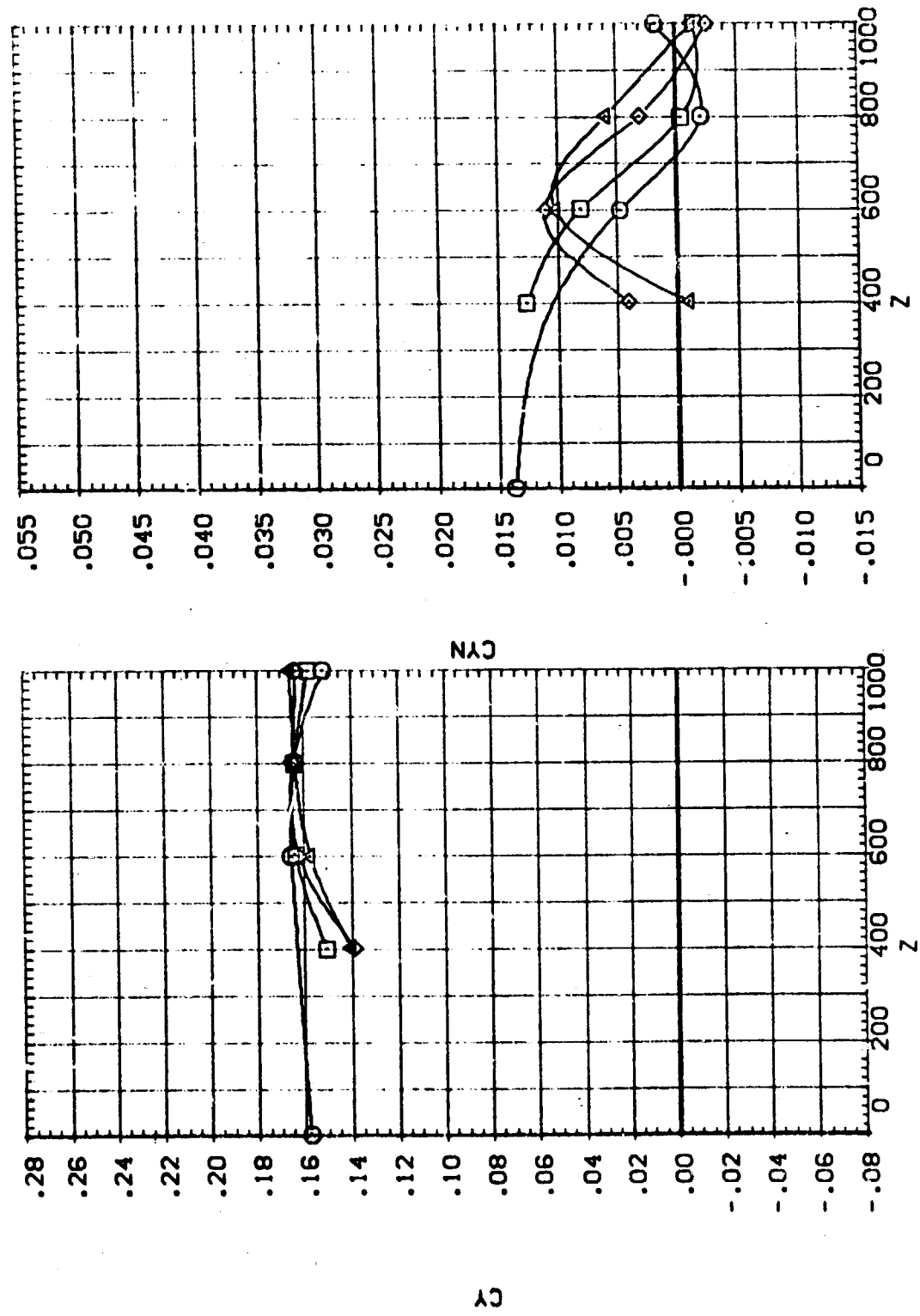


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 05T10 (RTJ398)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|--------|---------|--|
| | | MACH | 4.530 | POTIAL | 110.000 | |
| ○ | 300.380 | ALPHA | .000 | BETA | .000 | |
| □ | 600.820 | DALPHA | -5.000 | DBETA | -20.000 | |
| ◇ | 900.820 | Y | .000 | PC-MGR | .000 | |

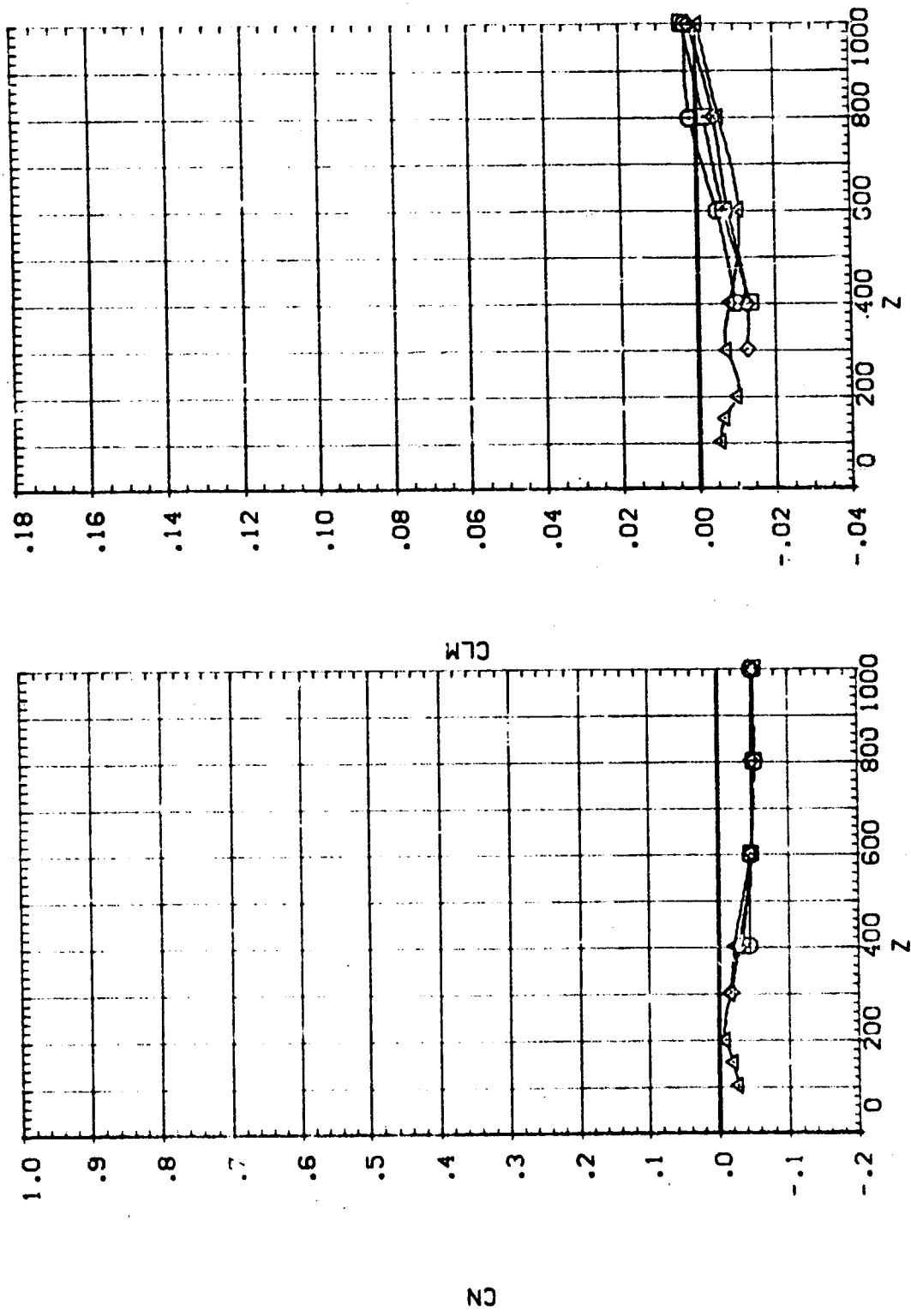


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S3) W/O PLUMES SEPARATING FROM 09T10 (RTJ399)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | POTIAL | 110.000 |
| □ | 300.290 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.660 | DALPHA | -5.000 | DBETA | -20.000 |
| △ | 900.550 | Y | 200.000 | PC-MSR | .000 |

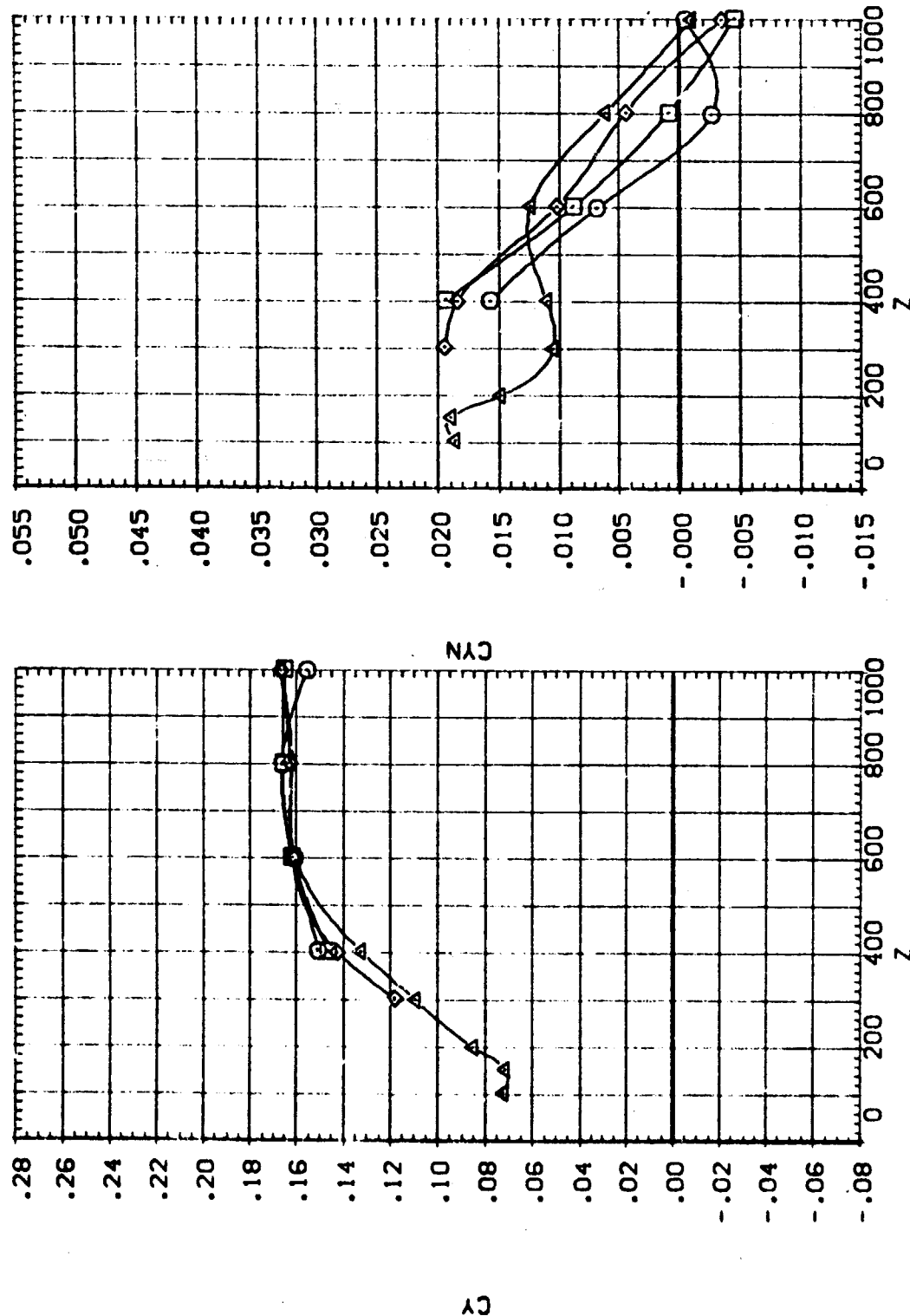


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ399)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|-------|
| | | MACH | PTOTAL | BETA | DBETA |
| ○ | 300.290 | .103 | 4.530 | .000 | .000 |
| □ | 600.660 | .103 | 4.530 | .000 | .000 |
| ◇ | 900.550 | .103 | 4.530 | .000 | .000 |
| △ | 900.550 | .103 | 4.530 | .000 | .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A:3 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ400)

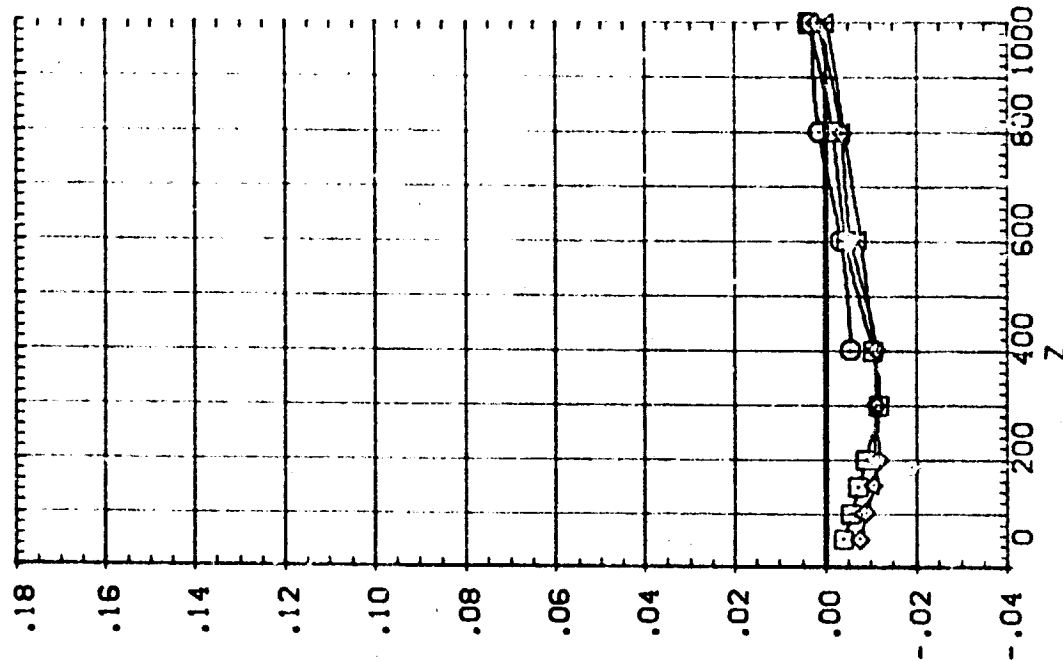
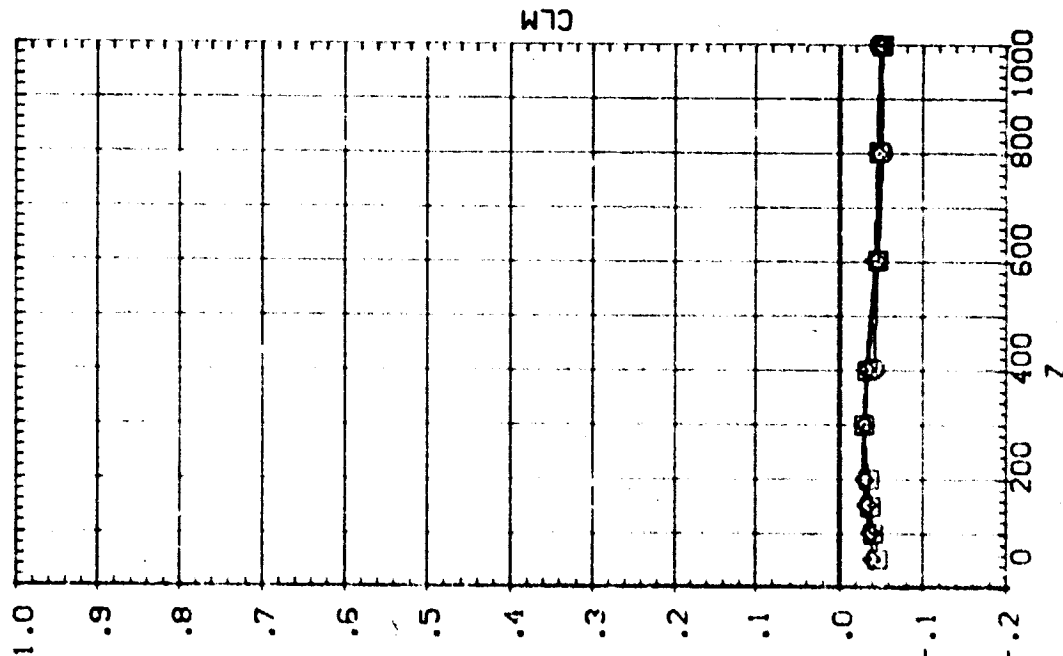
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | 110,000 |
|---------|------|---------|---------|
| 300,700 | .250 | 4,530 | .000 |
| 599,930 | .000 | .000 | .000 |
| 899,980 | .000 | -5,000 | .000 |
| | Y | 400,000 | PC-MBR |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



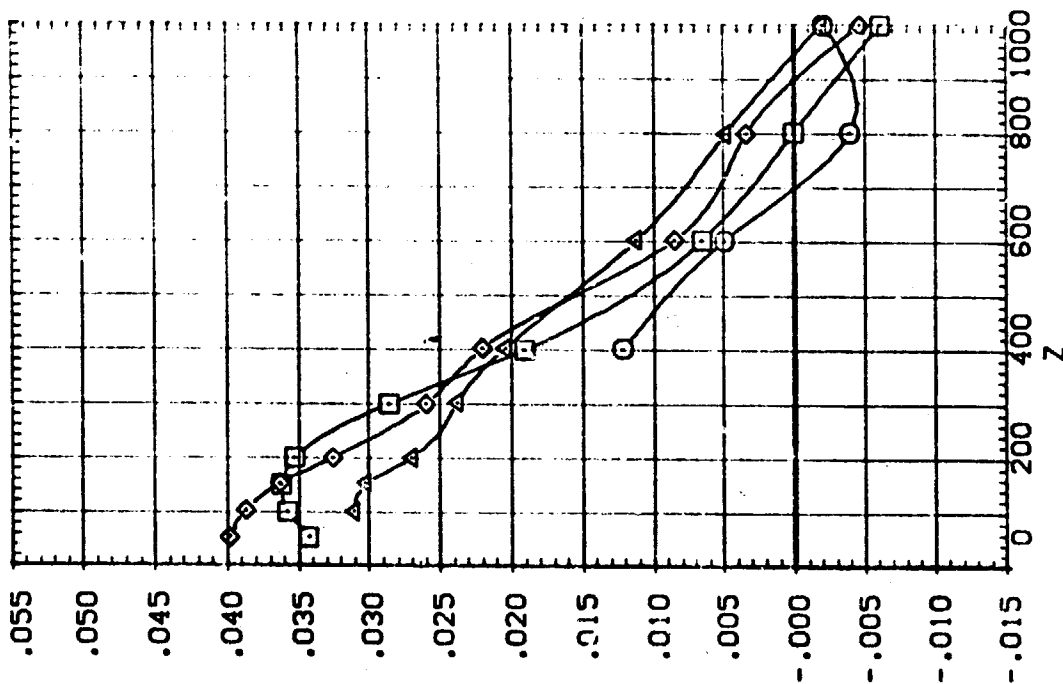
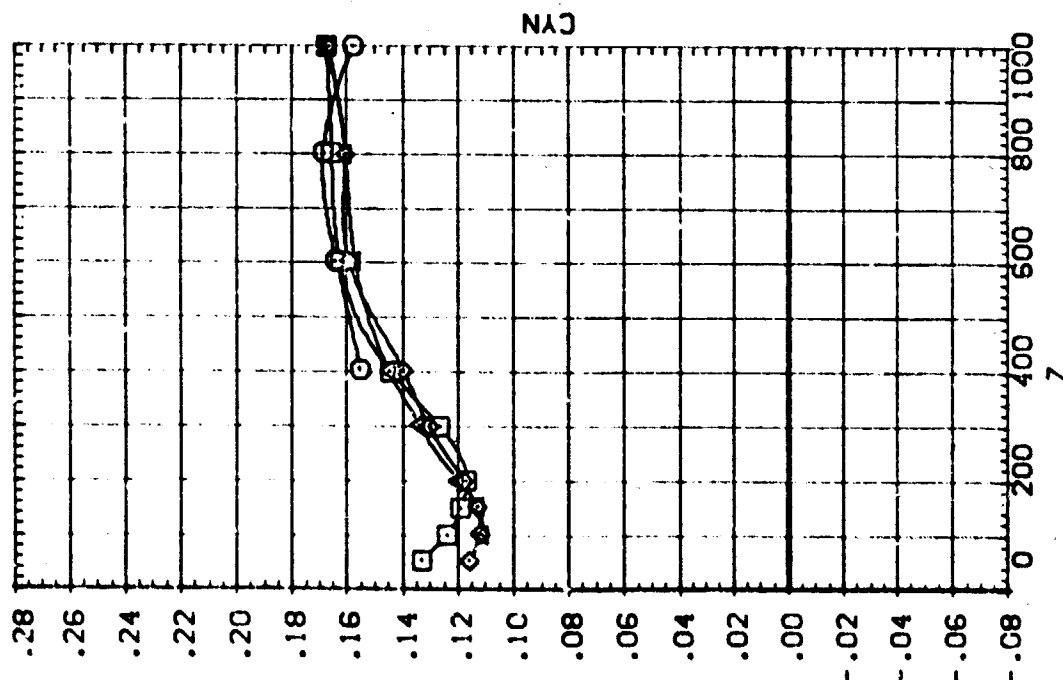
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ400)

SYMBOL
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 MACH 4.530 PISTAL 110.000
 ALPHA .000 BETA .000
 DALPHA -5.000 DBETA -20.000
 PC-HSR 400.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

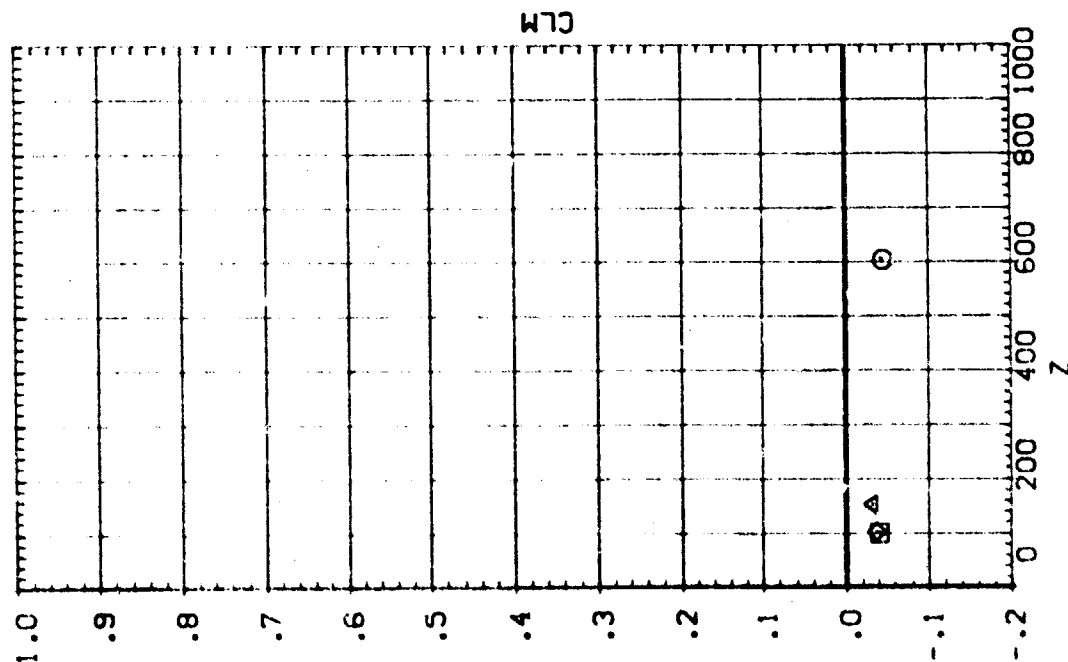
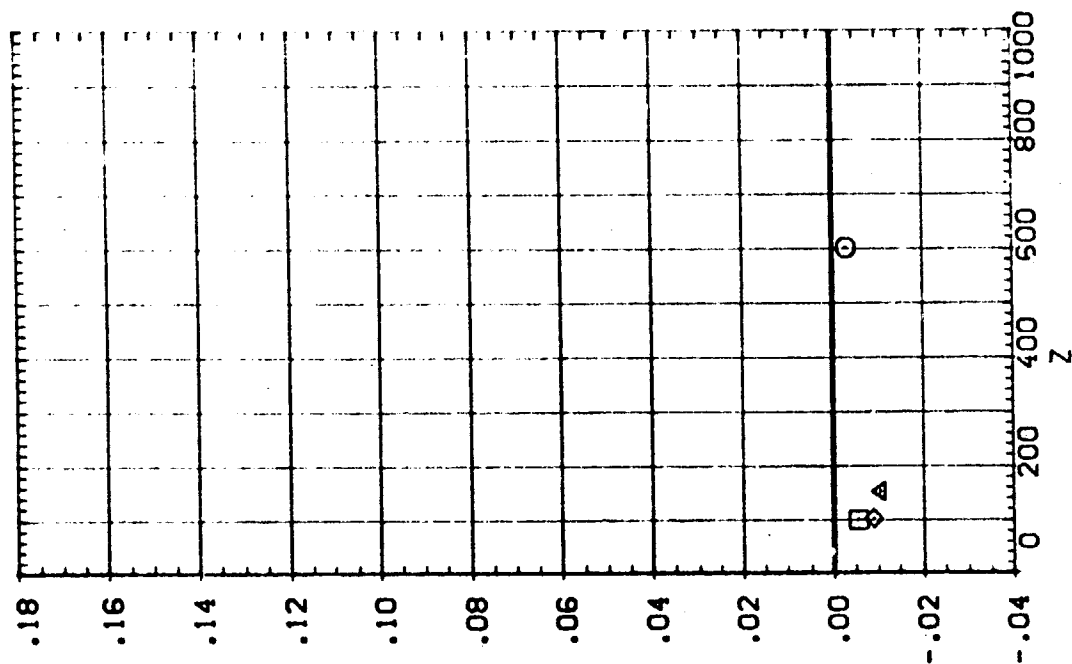


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ401)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .702 | 4.530 | PTOTAL 110.000 |
| ◇ | 300.510 | .000 | BETA .000 |
| △ | 600.100 | -5.000 | DBETA -20.000 |
| | 900.630 | 800.000 | PC-HBR .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ401)

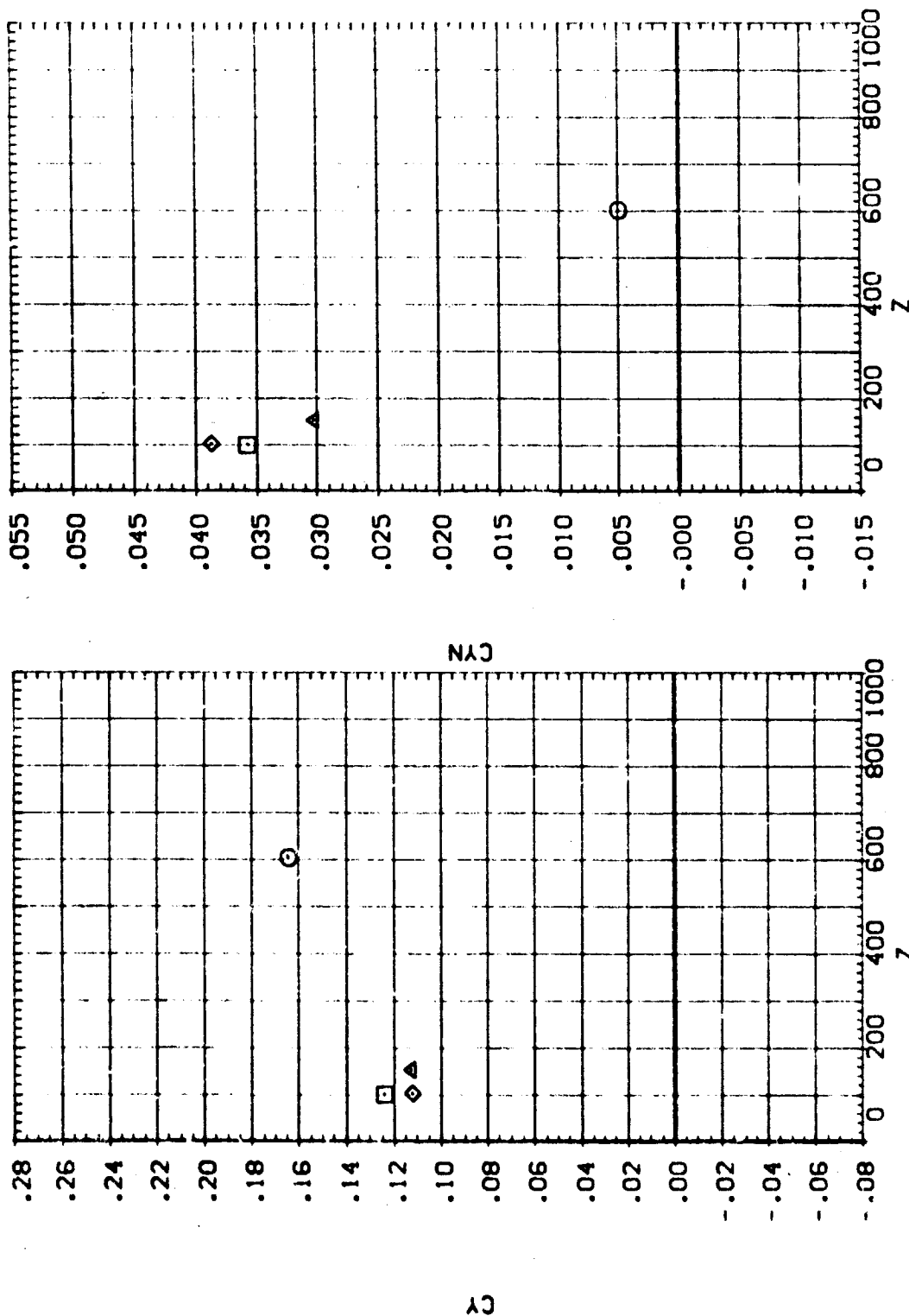
SYMBOL

PARAMETRIC VALUES

| | MACH | ALPHA | BETA | DBETA | PC-MGR |
|---------|------|-------|------|-------|--------|
| 300.510 | .702 | .000 | .000 | .000 | .000 |
| 600.100 | .000 | .000 | .000 | .000 | .000 |
| 900.630 | .000 | .000 | .000 | .000 | .000 |

○
□
◇
△

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

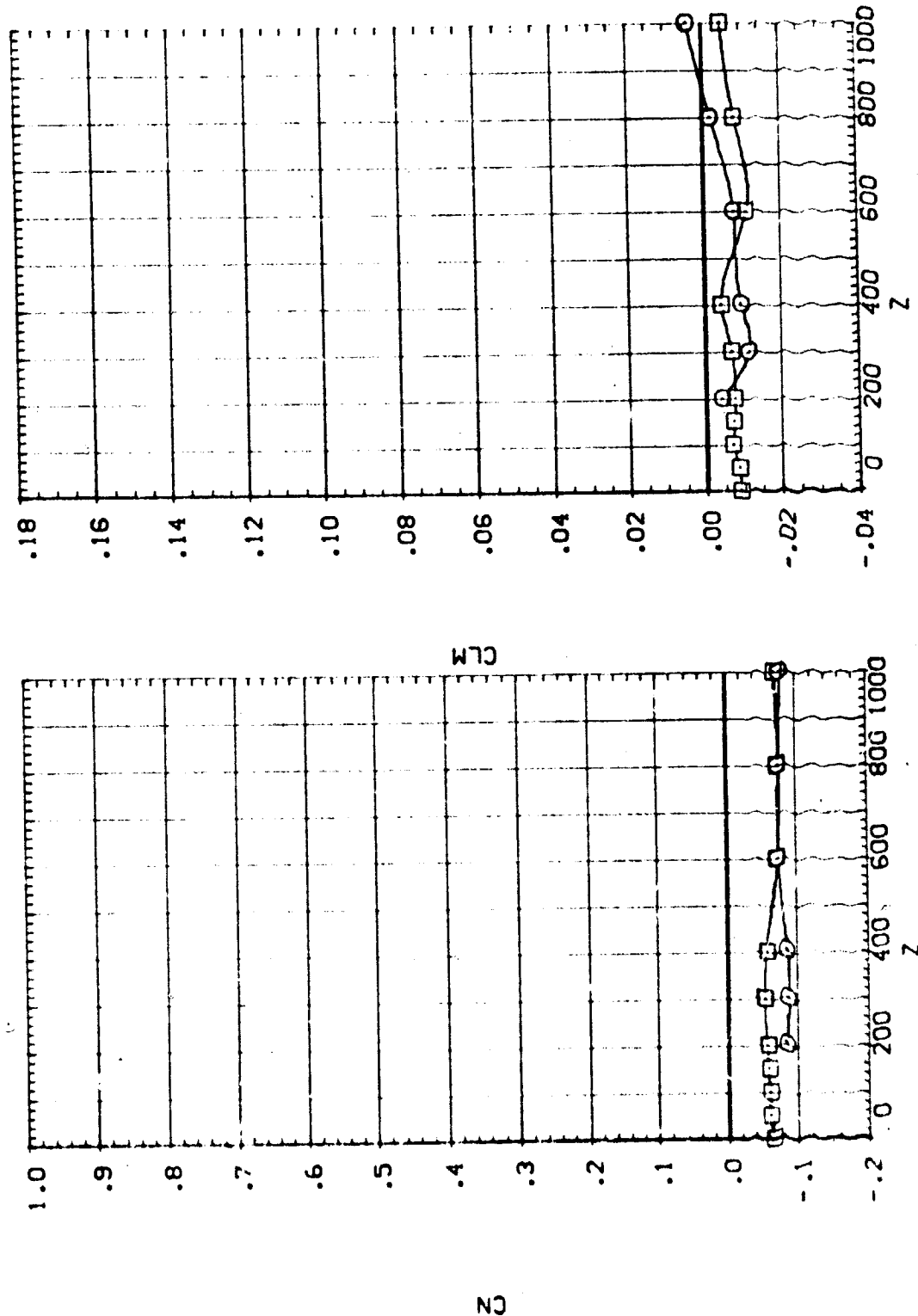


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ402)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH PARAMETRIC VALUES
900.990 .173 4.530 PTOTAL :10.000
ALPHA .000 BETA .000
DALPHA -10.000 DBETA 5.000
Y .000 PC408 .000



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ402)

SYMBOL

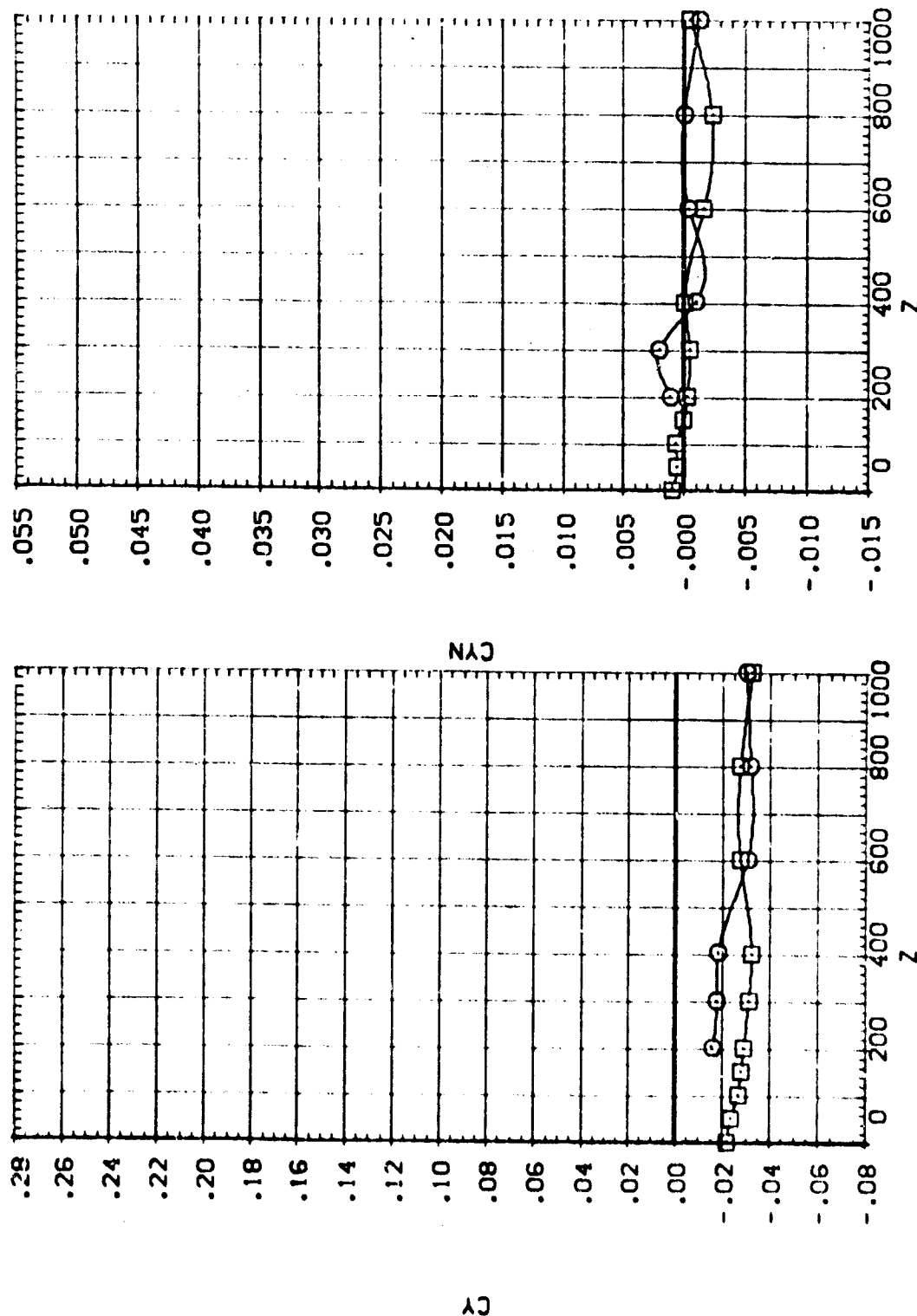
x .173
500.690

MACH
ALPHA
DALPHA

PARAMETRIC VALUES

4.530 PTOTAL 110.000
.000 BETA .000
-10.000 DBETA 5.000
.000 PC4BR .000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ403)

SYMBOL

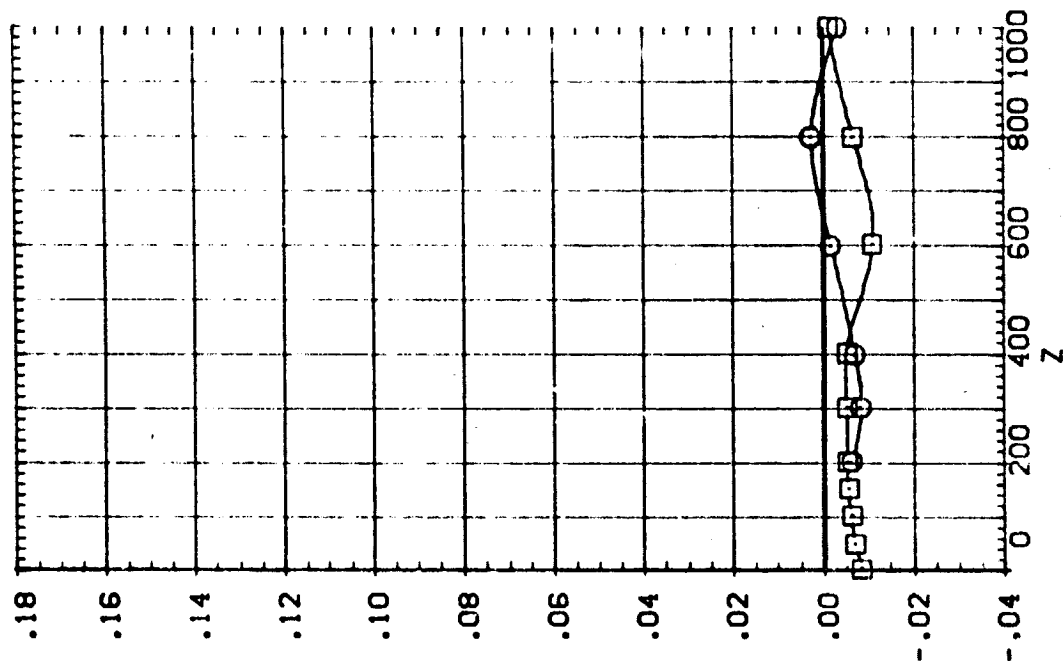
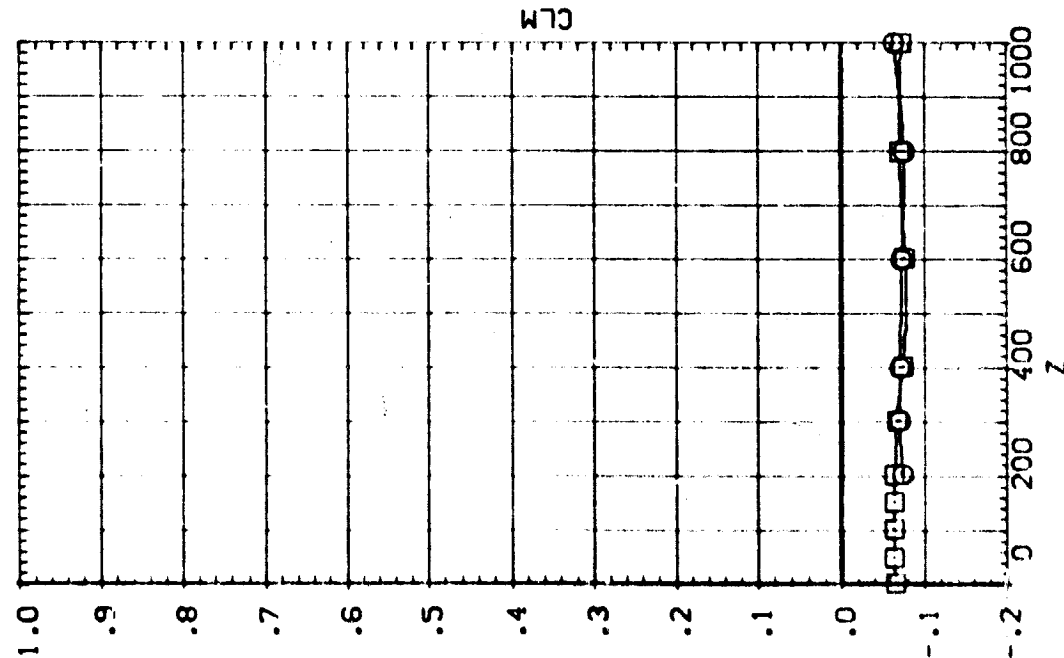
x .277
900.600

MACH
ALPHA
DIALPHA
Y

PARAMETRIC VALUES
4.530 PTOTAL
.000 BETA
-10.000 DBETA
200.000 PC+R

110.000
.000
5.000
.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

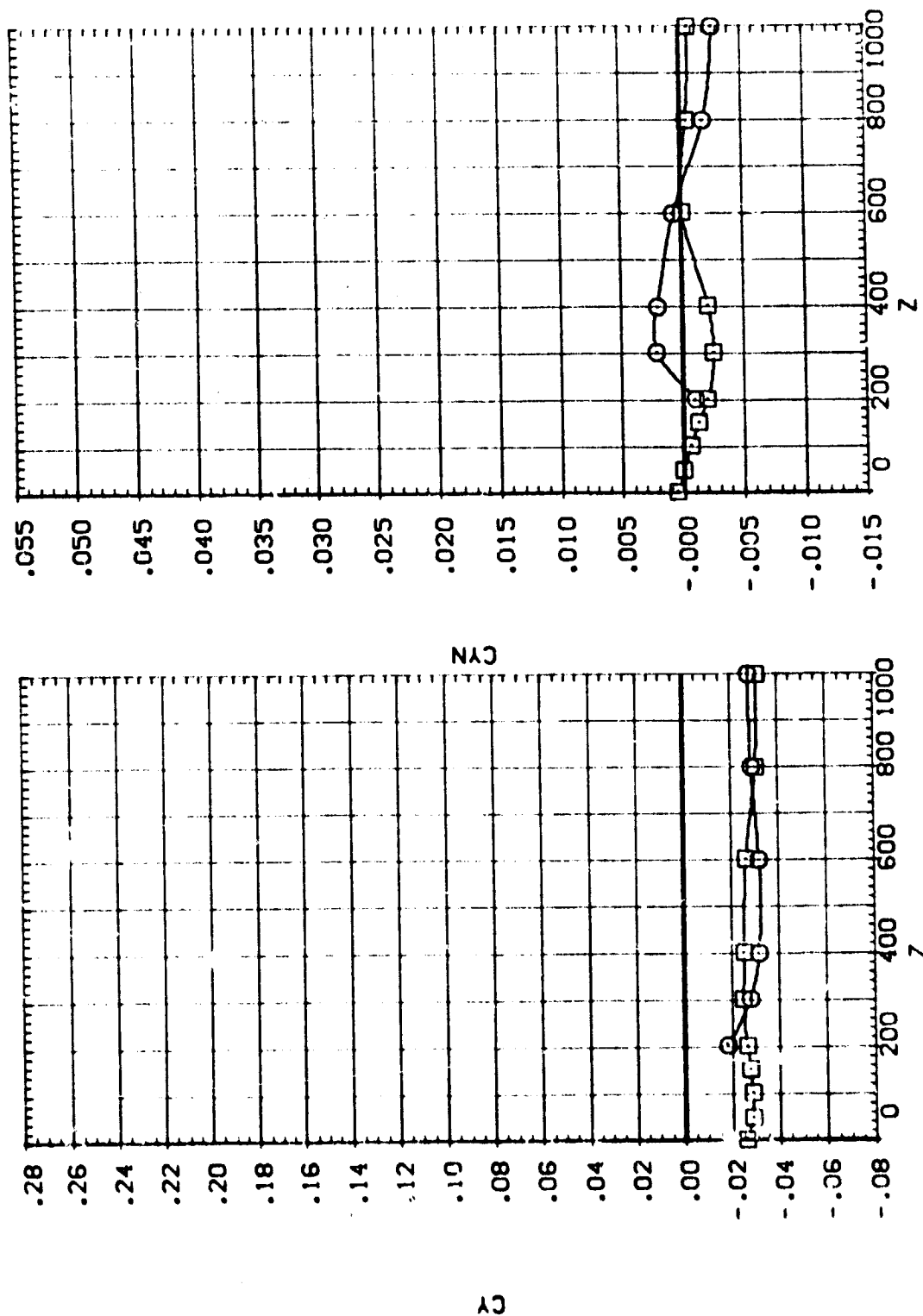


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ403)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|-------|
| | | MACH | PTOTAL | BETA | POWBR |
| □ | .277 | 4.530 | 110.000 | .000 | .000 |
| □ | 900.600 | .000 | .000 | 5.000 | .000 |
| □ | | -10.000 | 5.000 | | |
| □ | | 200.000 | | | |

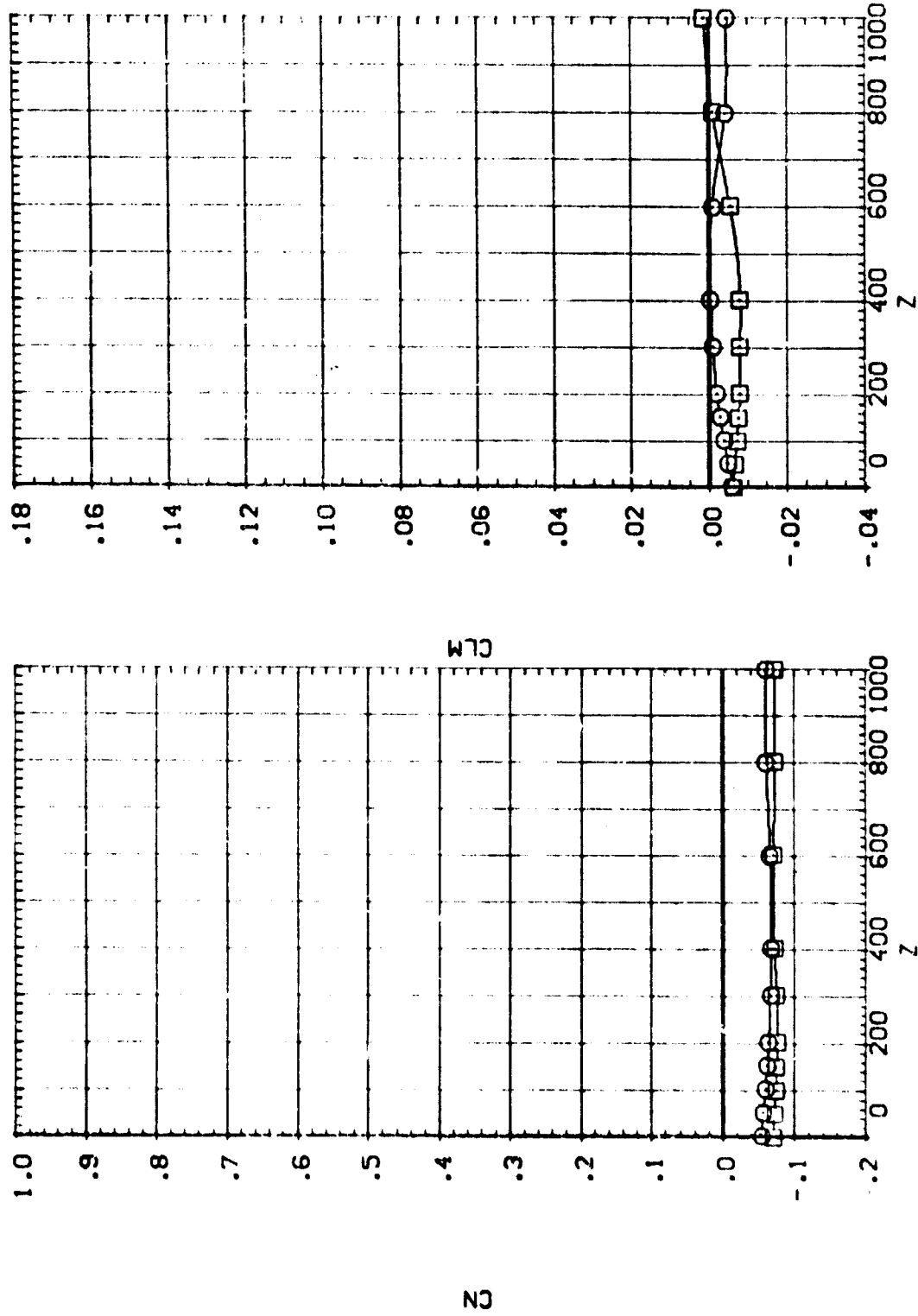


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RIJ404)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PIOTAL | 110.000 |
| ○ | 900.370 | ALPHA | .000 | BETA | .000 |
| □ | | ALPHA | -10.000 | DBETA | 5.000 |
| | | Y | 400.000 | PCH*BR | .000 |

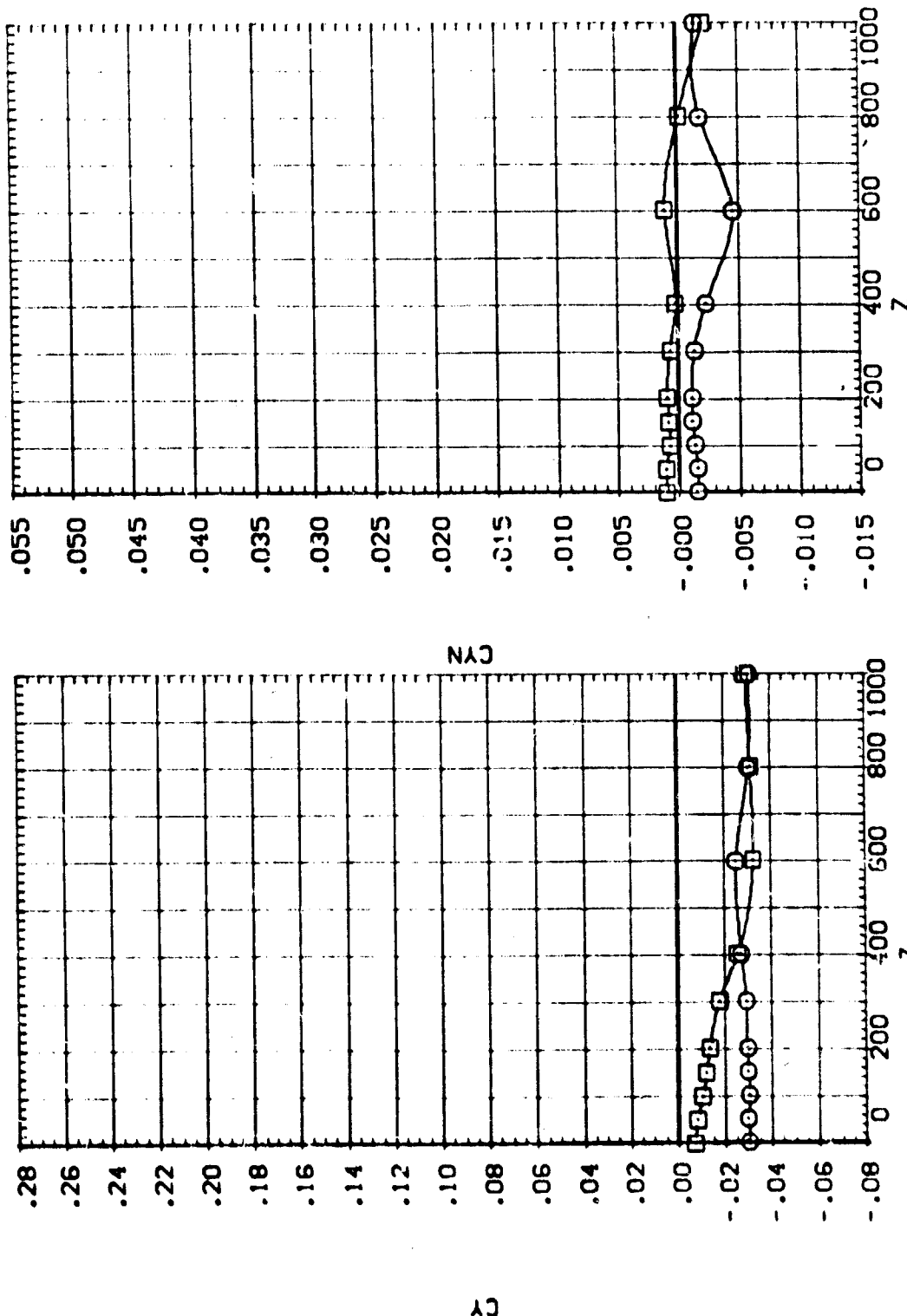


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ404)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|--------|
| | | MACH | PTOTAL | BETA | PC-MER |
| □ | .163 | 4.530 | 110.000 | .000 | .000 |
| ○ | 900.370 | ALPHA | -10.000 | DBETA | 5.000 |
| | | Y | 400.000 | | .000 |



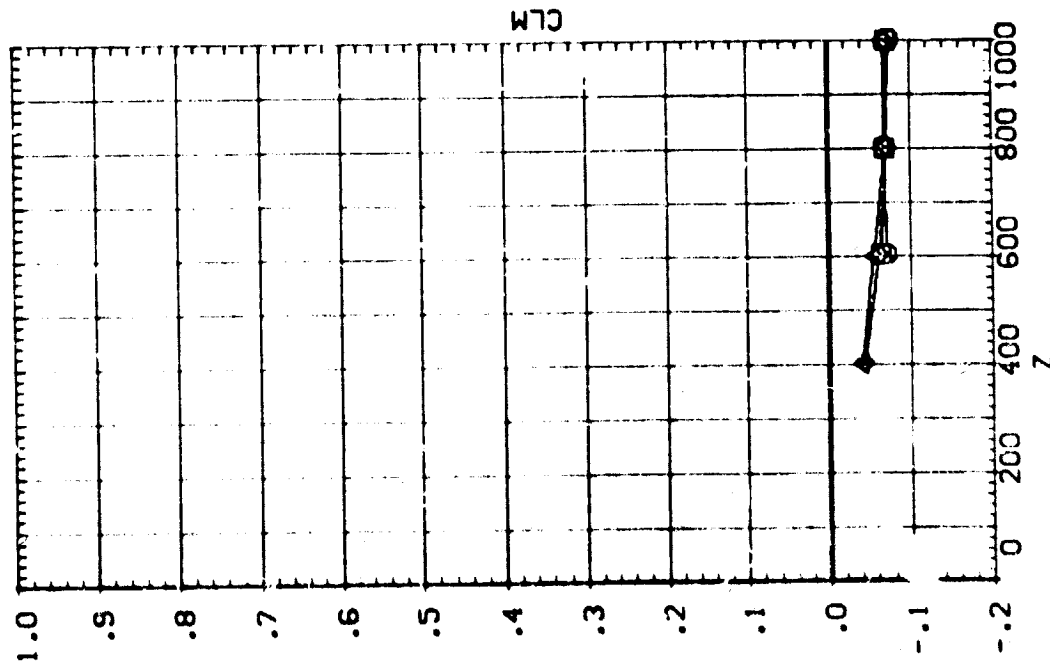
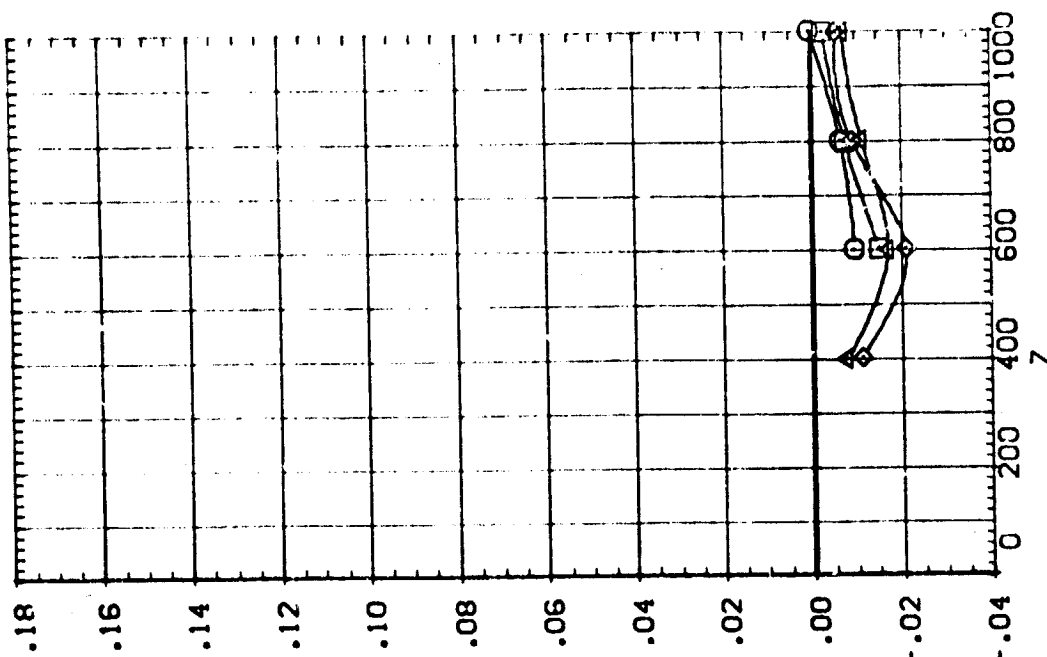
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 0RB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ405)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL
 ○
 □
 ◇
 △

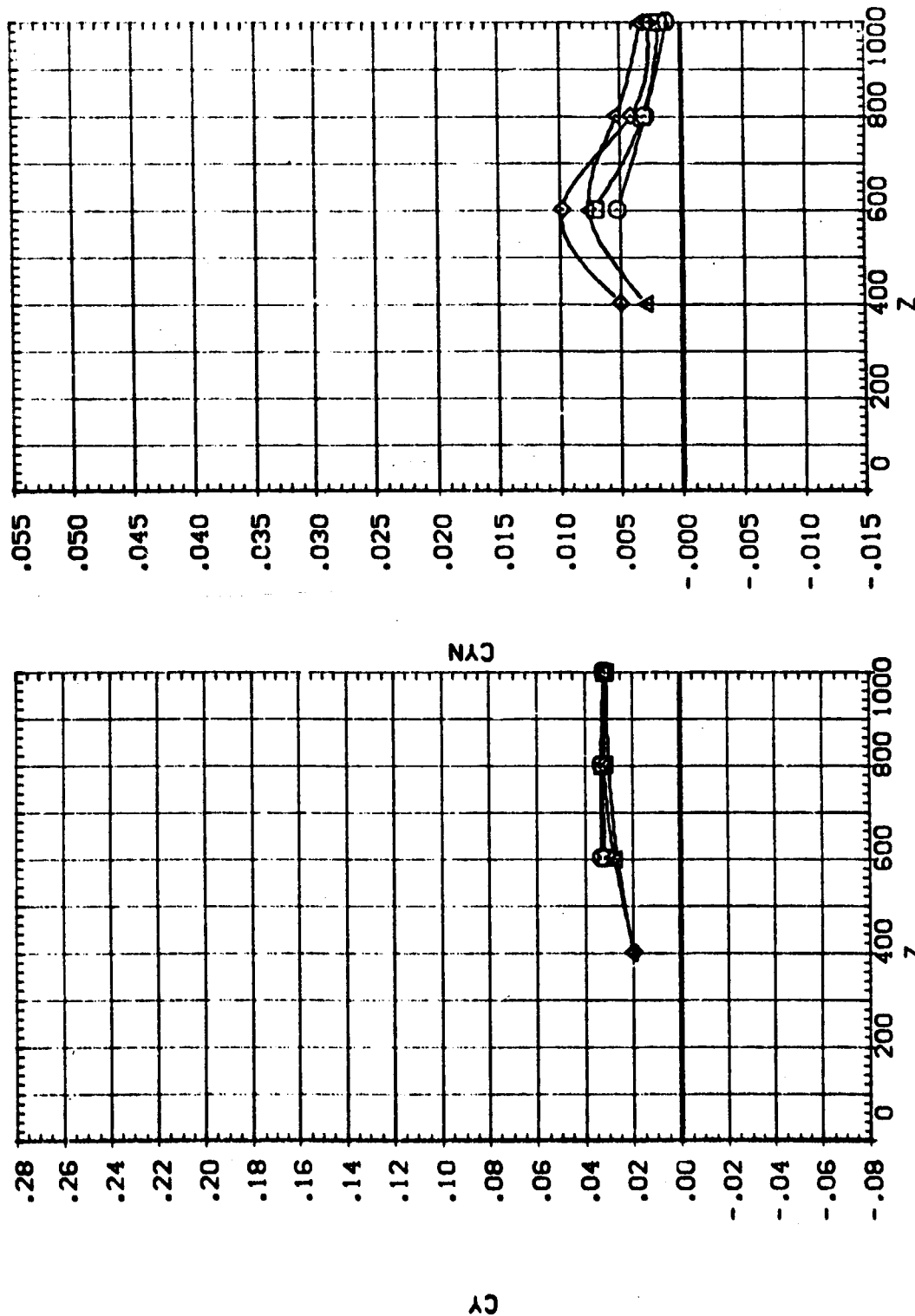
PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 DALT 10.000 DBETA -5.000
 V .000 PC-1BR .000



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|-------|
| | | MACH | PIOTAL | BETA | POWER |
| ○ | .469 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.580 | .000 | .000 | .000 | .000 |
| ◇ | 600.600 | -10.000 | .000 | .000 | .000 |
| △ | 900.340 | .000 | .000 | .000 | .000 |

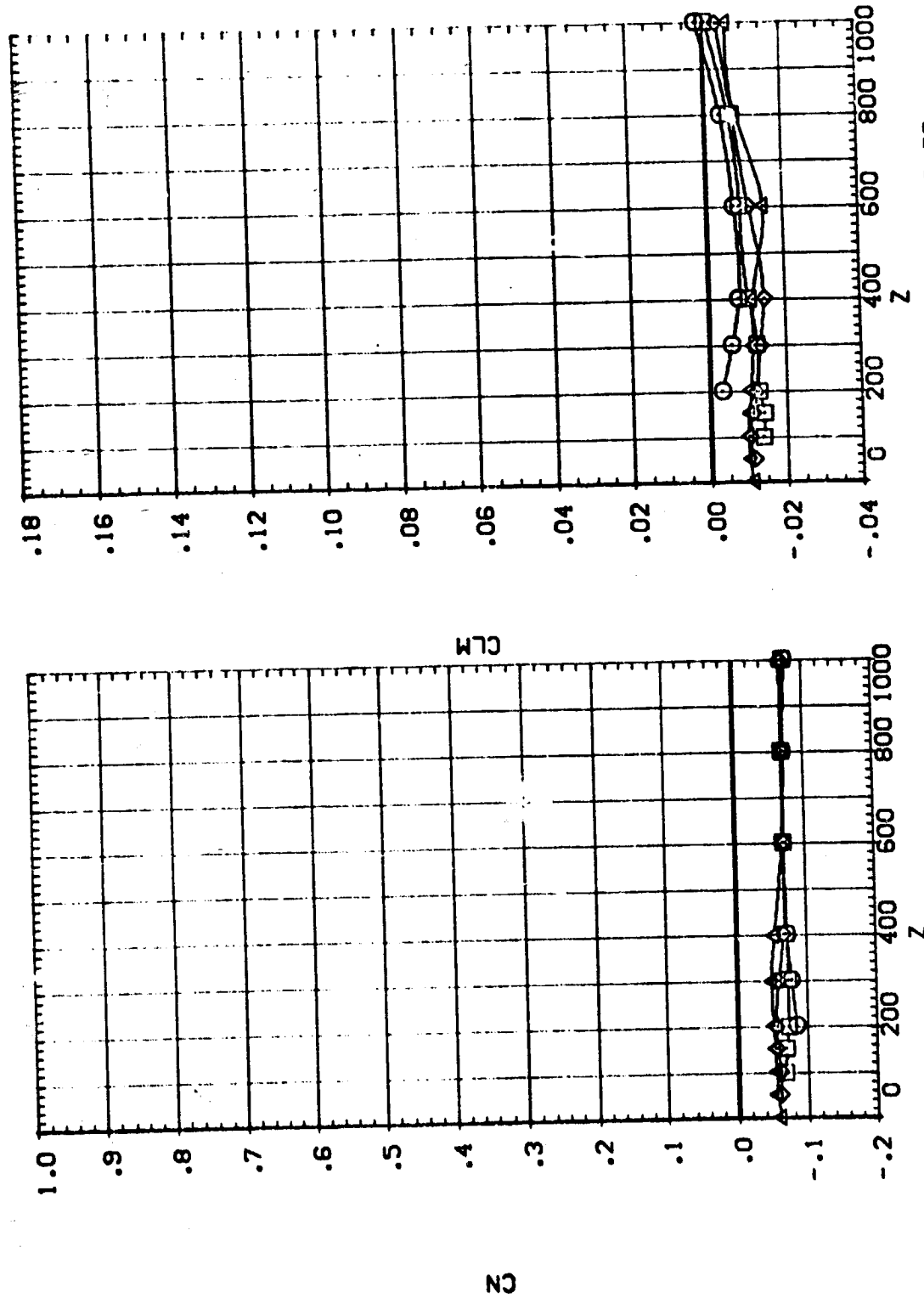


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ406)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|---------|---------|--|
| | | | 4.530 | P TOTAL | 110.000 | |
| ○ | 300.360 | ALPHA | .000 | BETA | .000 | |
| □ | 600.610 | DALPHA | -10.000 | DBETA | -5.000 | |
| ◇ | 900.830 | Y | 200.000 | PCH#BR | .000 | |

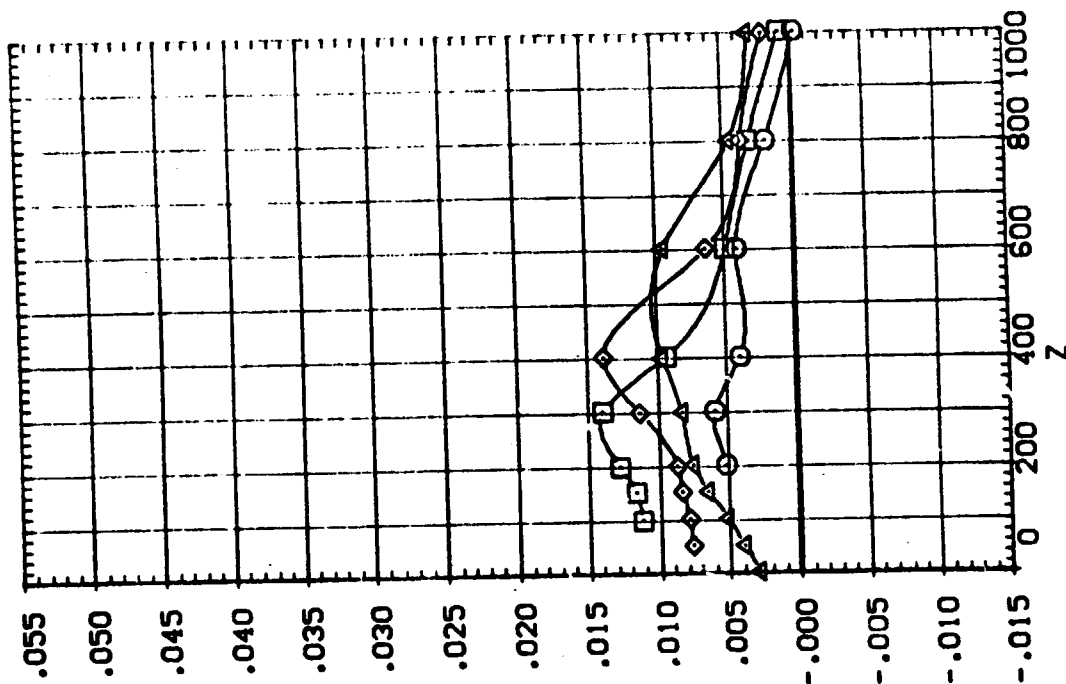
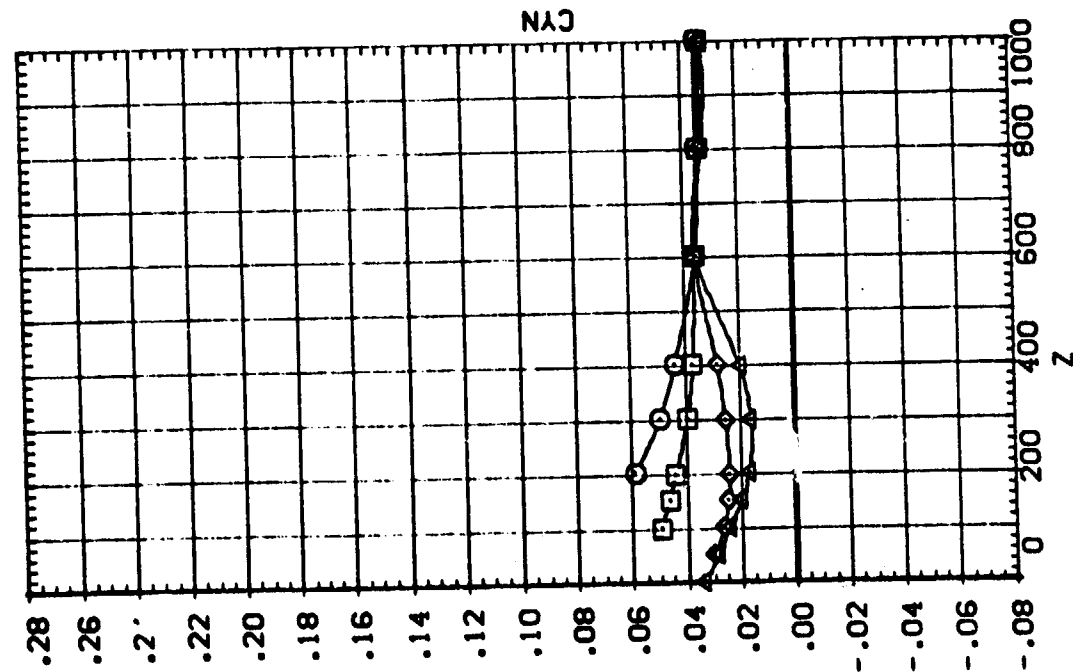


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ406)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| X | MACH | PARAMETRIC VALUES | | | |
|---------|--------|-------------------|--------|---------|--|
| | | 4.530 | PTOTAL | 110.000 | |
| 300.360 | ALPHA | .000 | BETA | .000 | |
| 600.610 | DALPHA | -10.000 | DBETA | -5.000 | |
| 900.830 | Y | 200.000 | PC-PR | .000 | |

SYMBOL
 ○ □ ◇ △

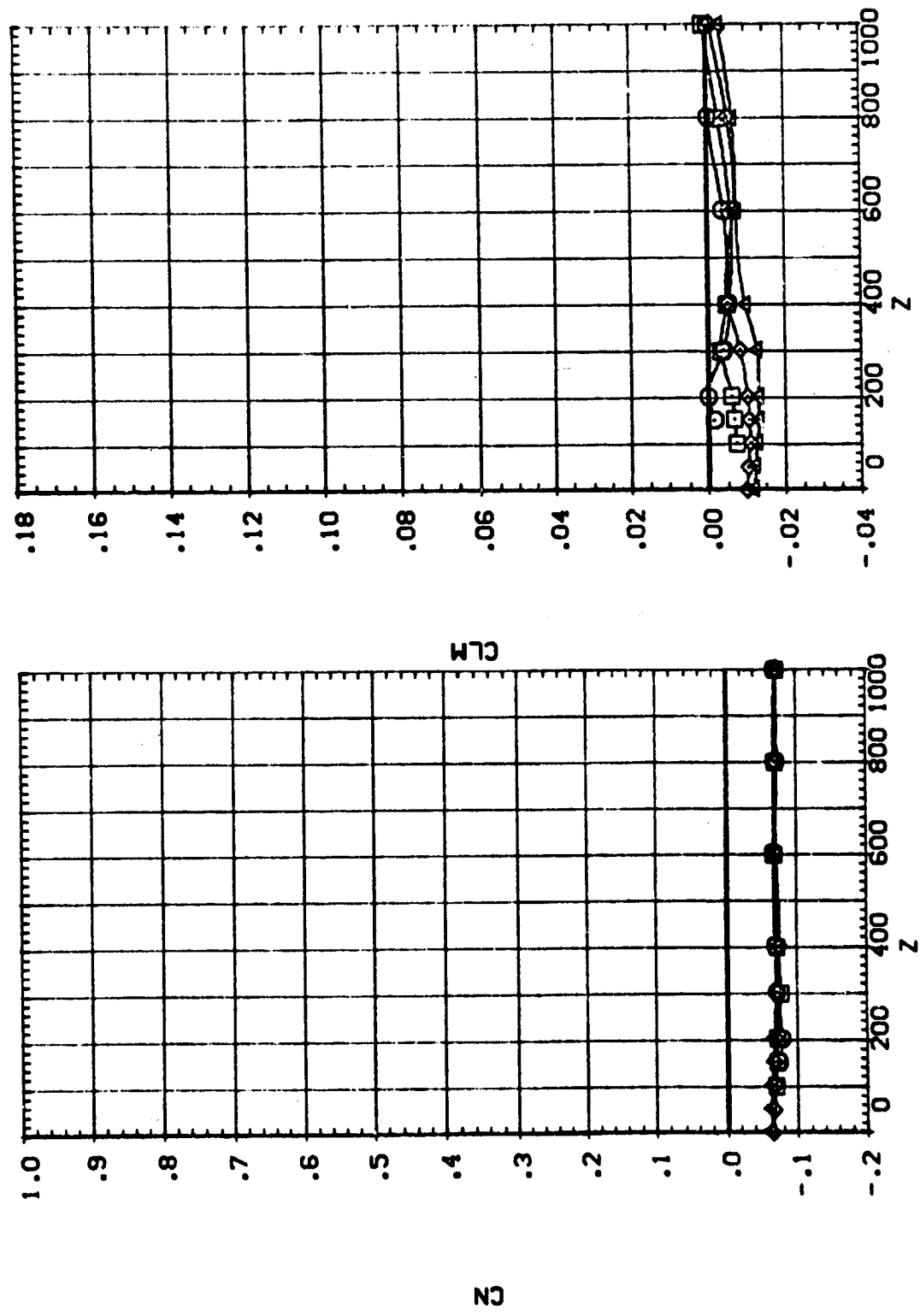


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ407)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .256 | 4.530 | PTOTAL 110.000 |
| □ | 299.850 | .000 | BETA .000 |
| ◇ | 600.400 | -10.000 | DBETA -5.000 |
| △ | 900.580 | 400.000 | PC-MGR .000 |

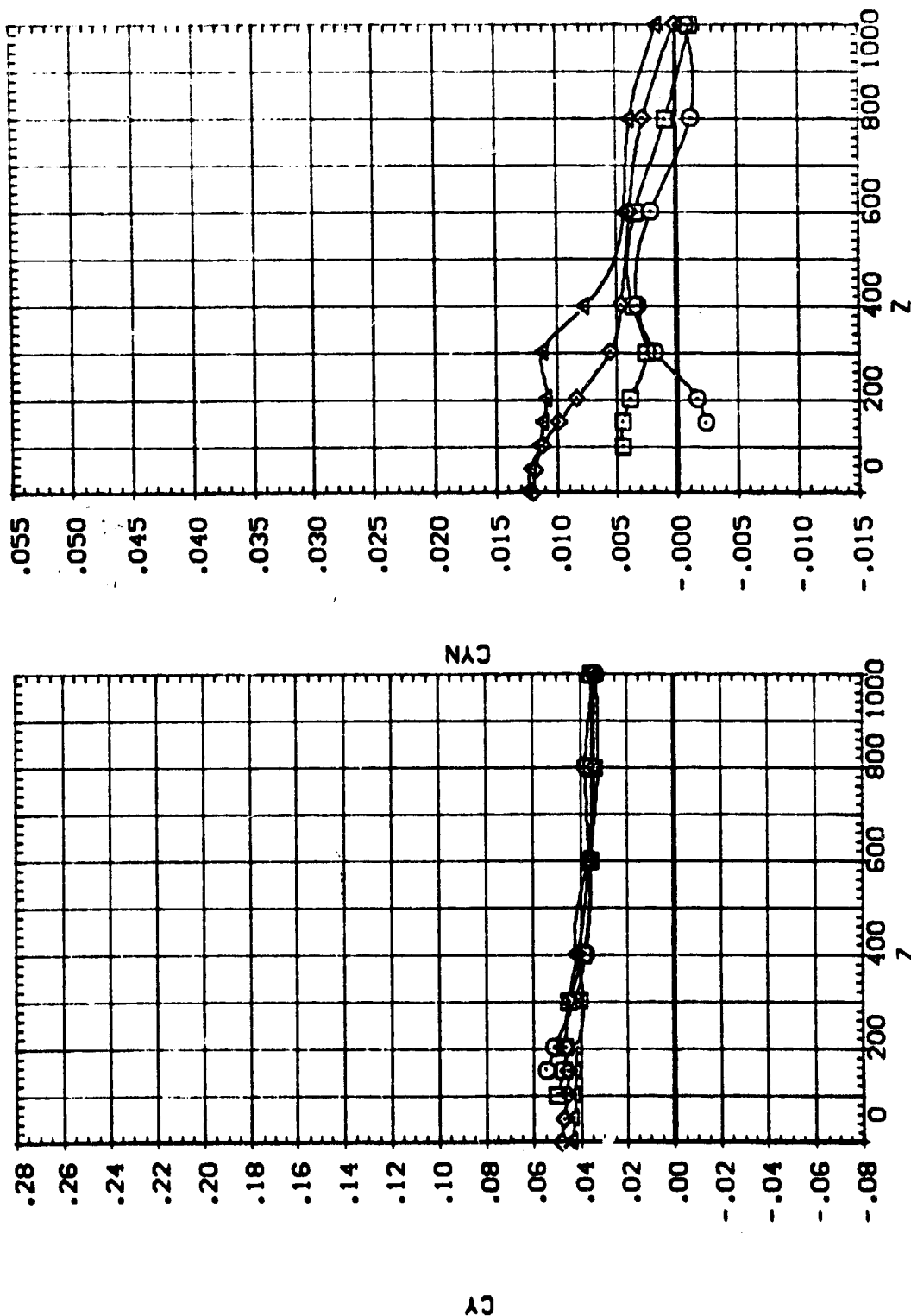


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ407)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X MACH ALPHA DYNAMIC VISCOSITY TOTAL BETA OBETA PC-#8R

| | | | | | | | |
|---|---------|-------|-------|----------|-------|-------|-------|
| ○ | 299.890 | 4.530 | 0.000 | 1110.000 | 0.000 | 0.000 | 0.000 |
| □ | 600.400 | 4.530 | 0.000 | 1110.000 | 0.000 | 0.000 | 0.000 |
| ◇ | 900.580 | 4.530 | 0.000 | 1110.000 | 0.000 | 0.000 | 0.000 |

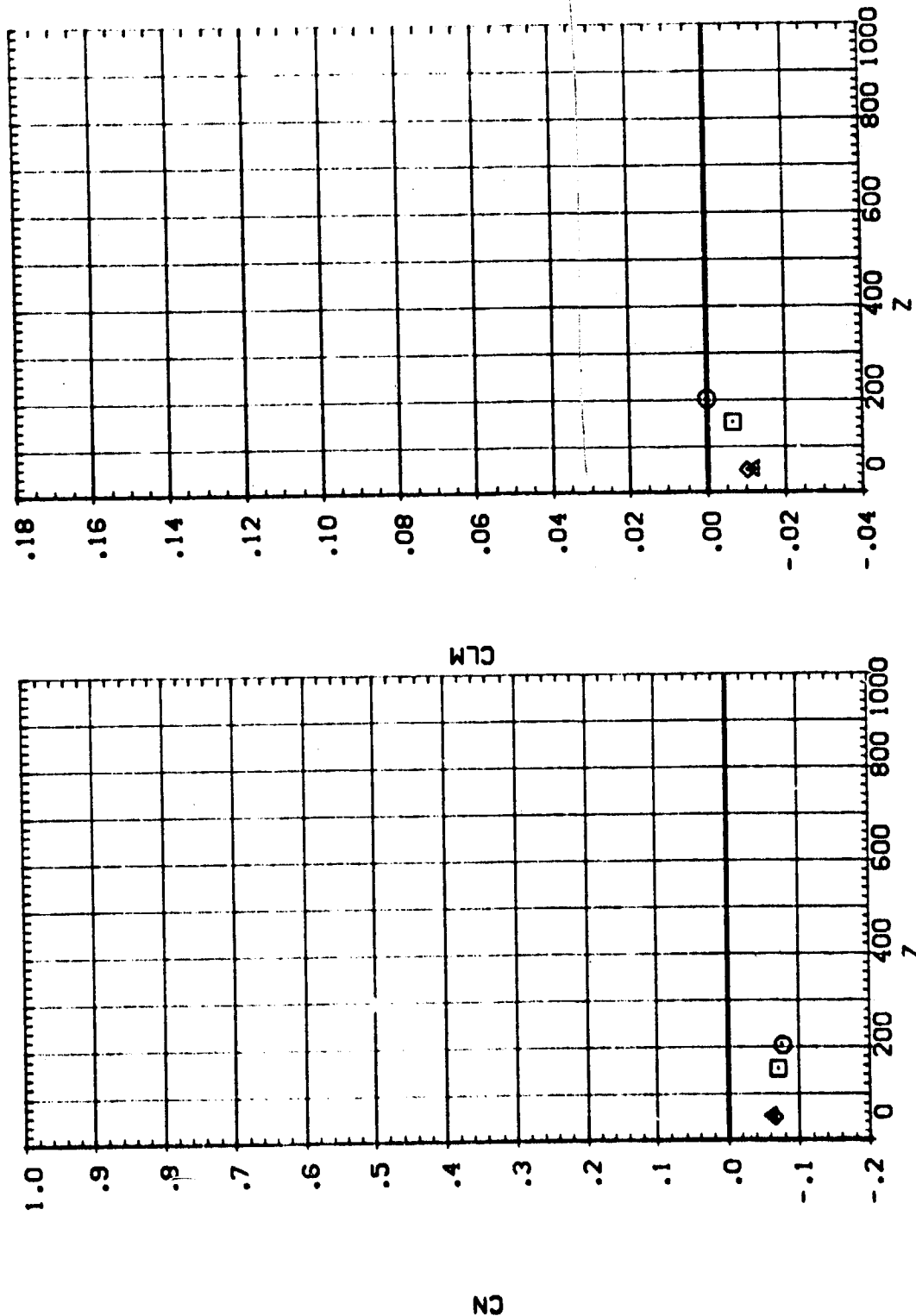


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ408)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|-------|
| | | MACH | PTOTAL | BETA | POWER |
| □ | .294 | 4.530 | 110.000 | .000 | .000 |
| ◇ | 300.390 | .000 | .000 | -5.000 | .000 |
| △ | 600.540 | -10.000 | .000 | .000 | .000 |
| | 900.680 | 800.000 | .000 | .000 | .000 |

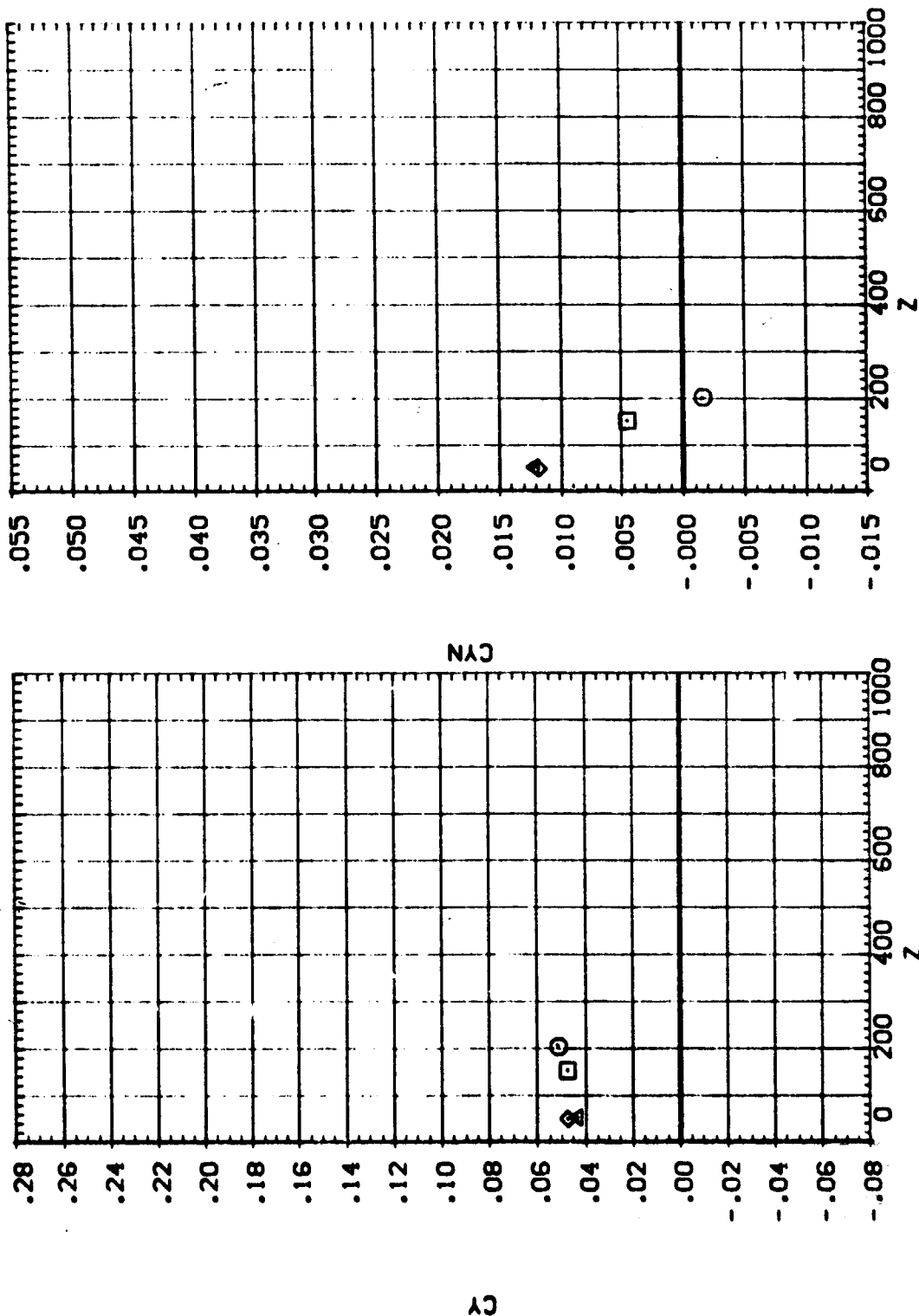


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ408)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES |
|--------|---------|-------------------|
| ○ | .294 | MACH |
| □ | 300.250 | ALPHA |
| ◇ | 600.540 | DALPHA |
| △ | 900.680 | Y |
| | | 4.530 P/TOTAL |
| | | .000 BETA |
| | | -10.000 DBETA |
| | | 800.000 PC#BR |
| | | 110.000 |
| | | .000 |
| | | -5.000 |
| | | .000 |

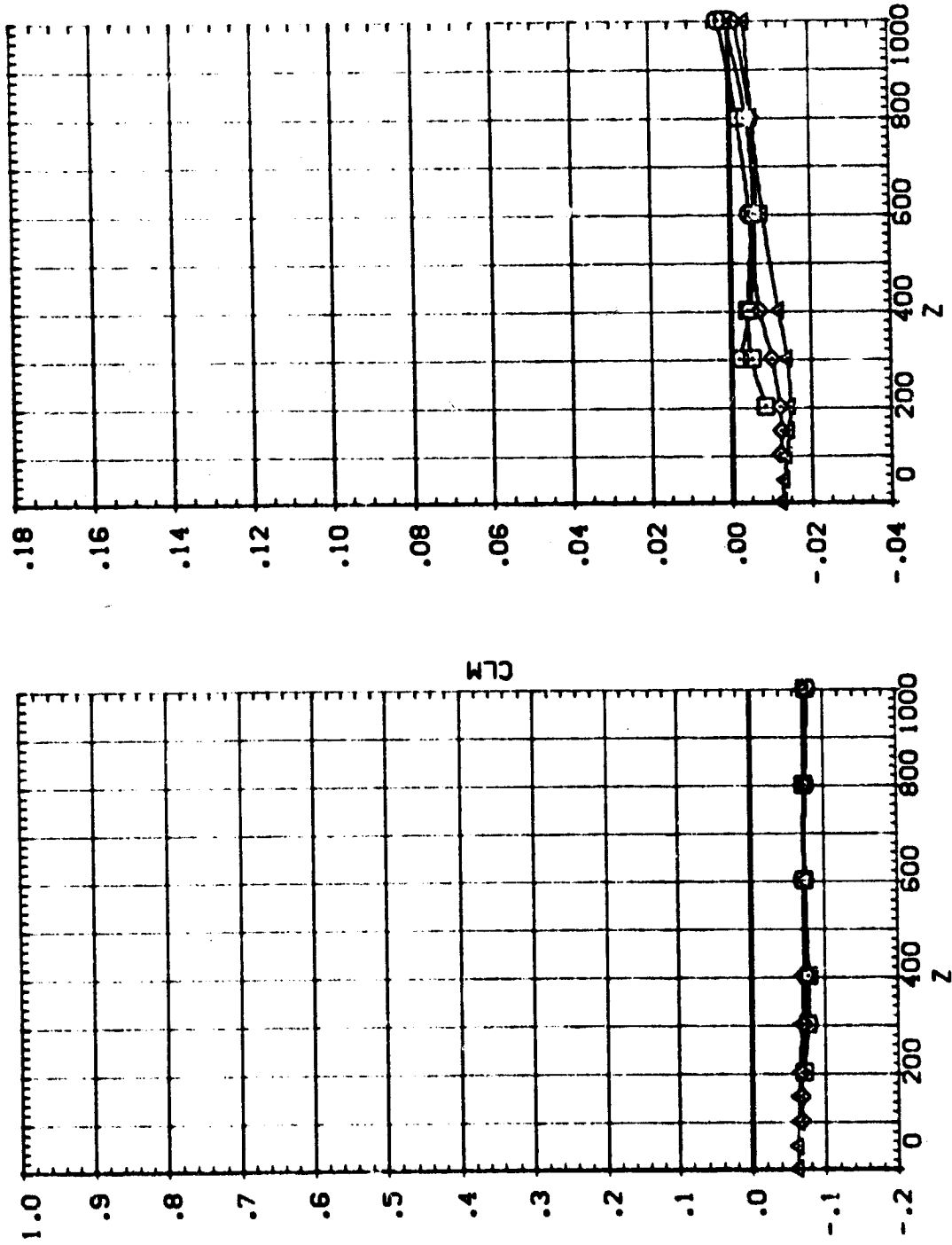


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ410)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

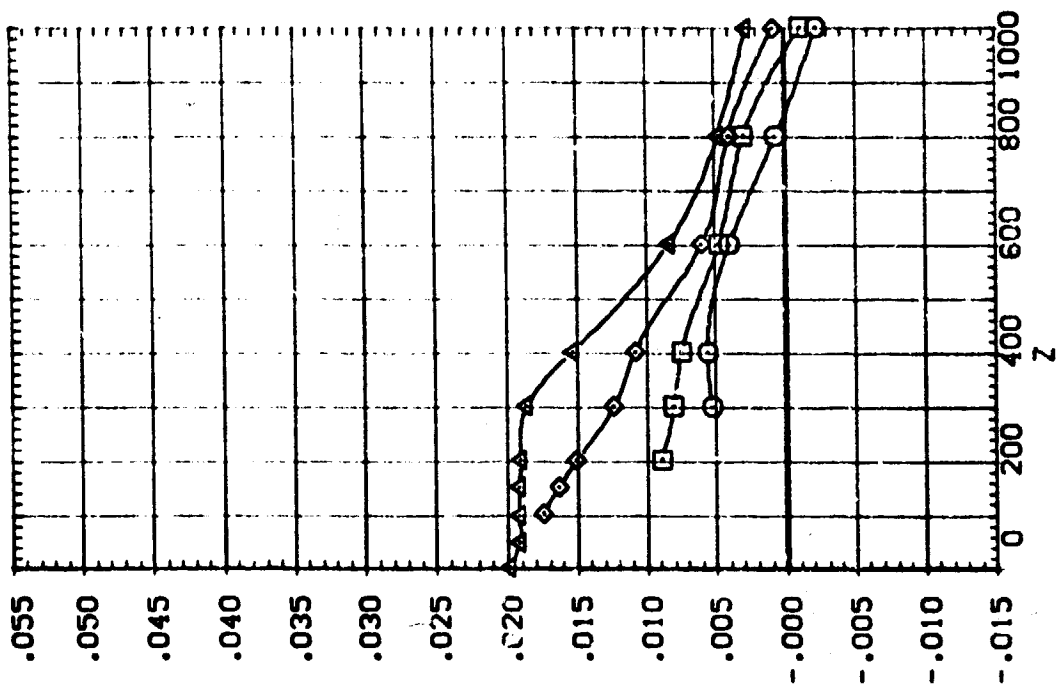
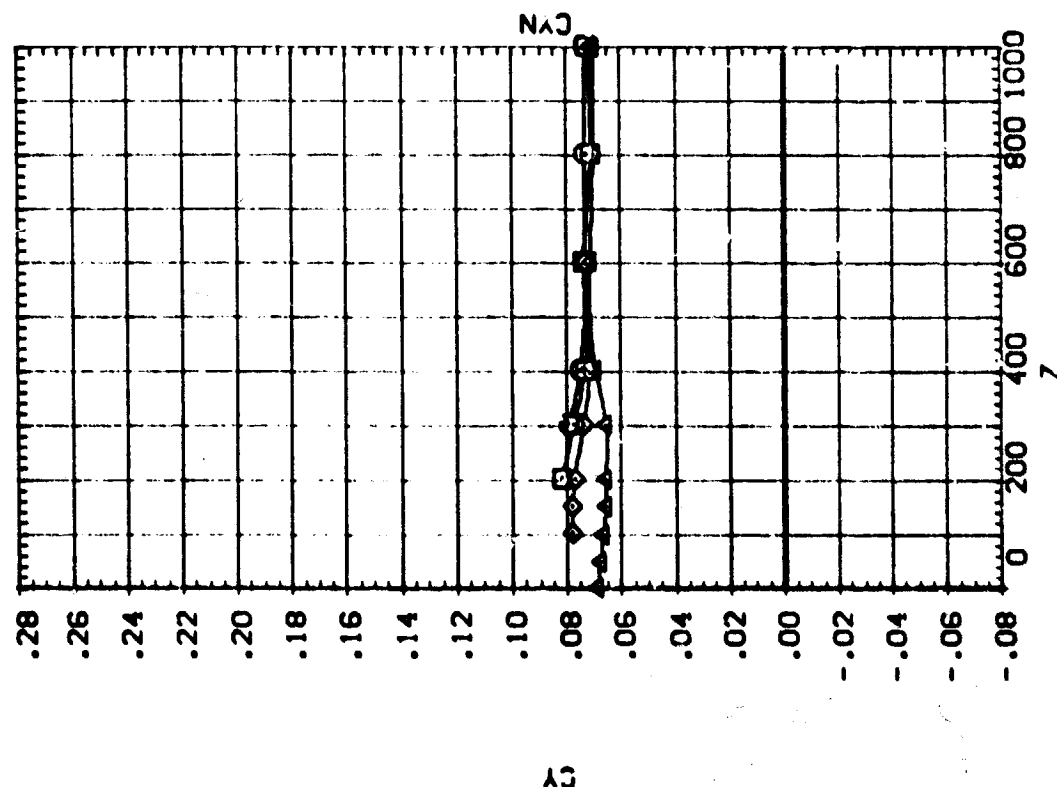
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.600 | ALPHA | .000 | BETA | .000 | |
| □ | 600.430 | DALPHA | -10.000 | DBETA | -10.000 | |
| ◇ | 900.530 | Y | 400.000 | POWER | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RIJ410)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X .355 MACH 4.530 PTOTA. 110.000
 300.600 ALPHA .000 BETA .000
 600.430 DALPHA -10.000 DBETA -10.000
 900.530 V 400.000 PCWEP .000

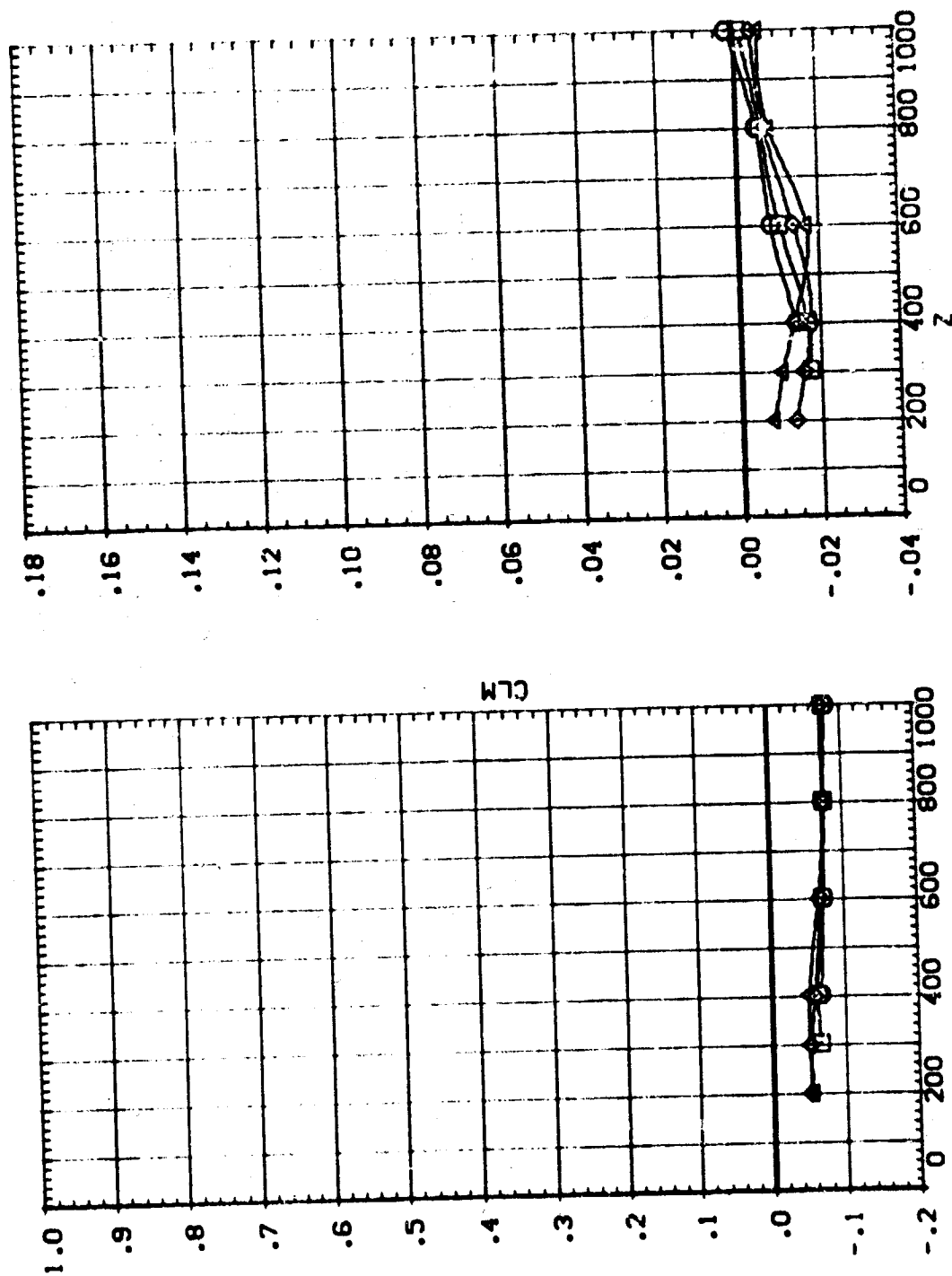


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM ORBIT (RTJ411)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

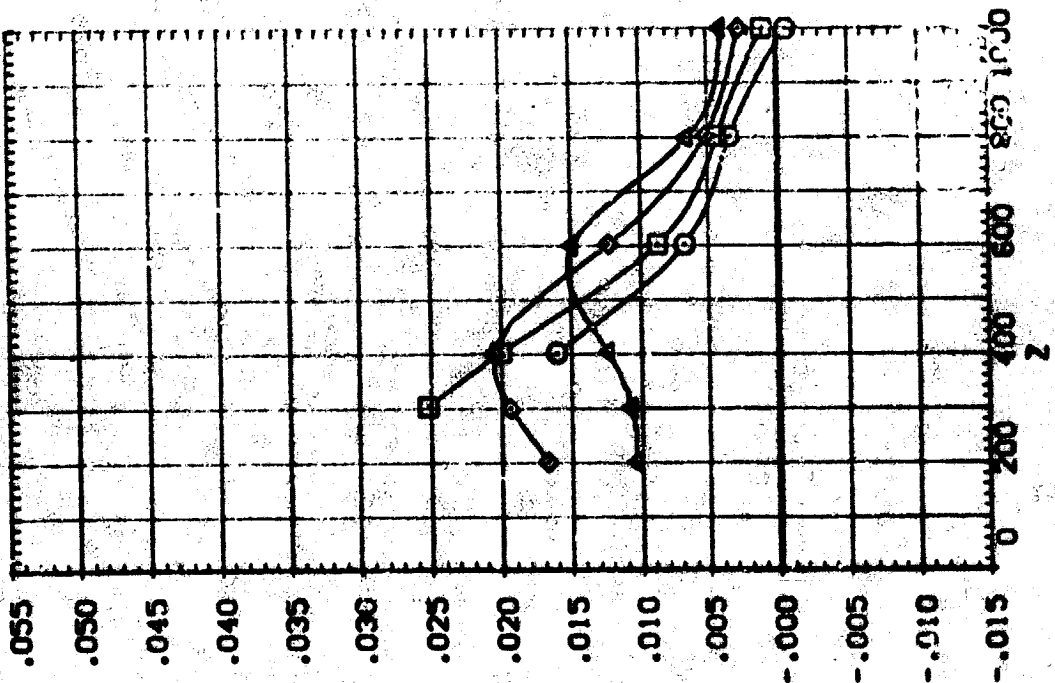
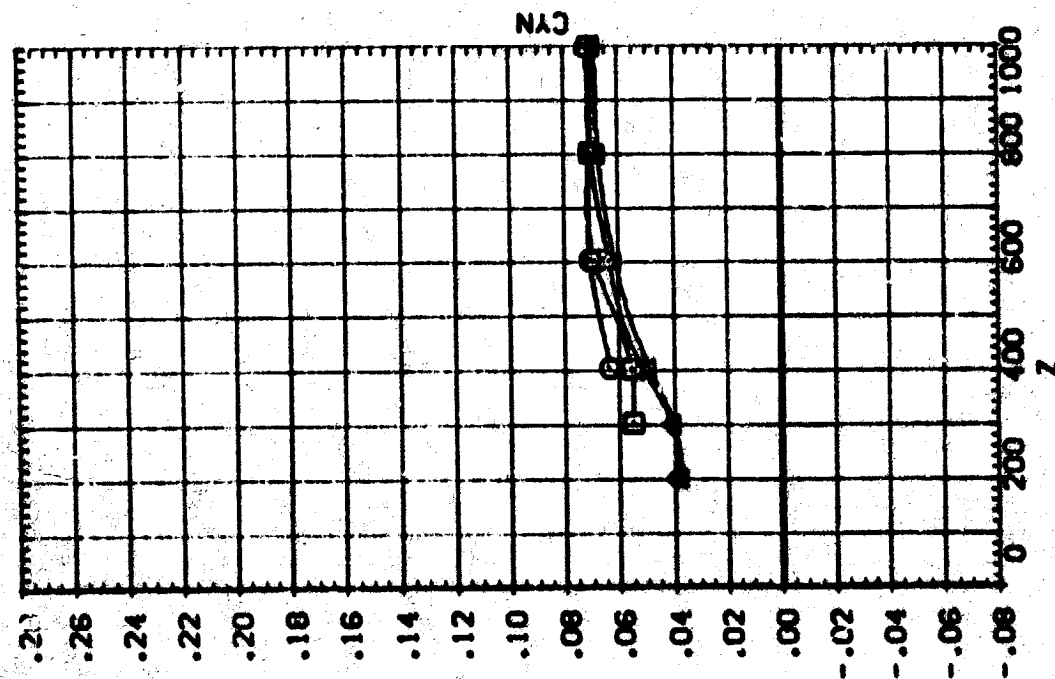
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MAOH | 4.530 | POTIAL | 110.000 |
| □ | 300.640 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.250 | DALPHA | -10.000 | DBETA | -10.000 |
| △ | 900.070 | Y | 200.000 | PC+PR | .000 |



1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ411)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| X | | PARAMETRIC VALUES | | | |
|---------|-------|-------------------|--------|---------|--|
| 300.000 | NOY | 4.530 | PIOTAL | 110.000 | |
| 300.000 | ALPHA | .000 | BETA | .000 | |
| 300.000 | DELTA | -10.000 | DBETA | -10.000 | |
| 300.000 | Y | 200.000 | POWER | .000 | |

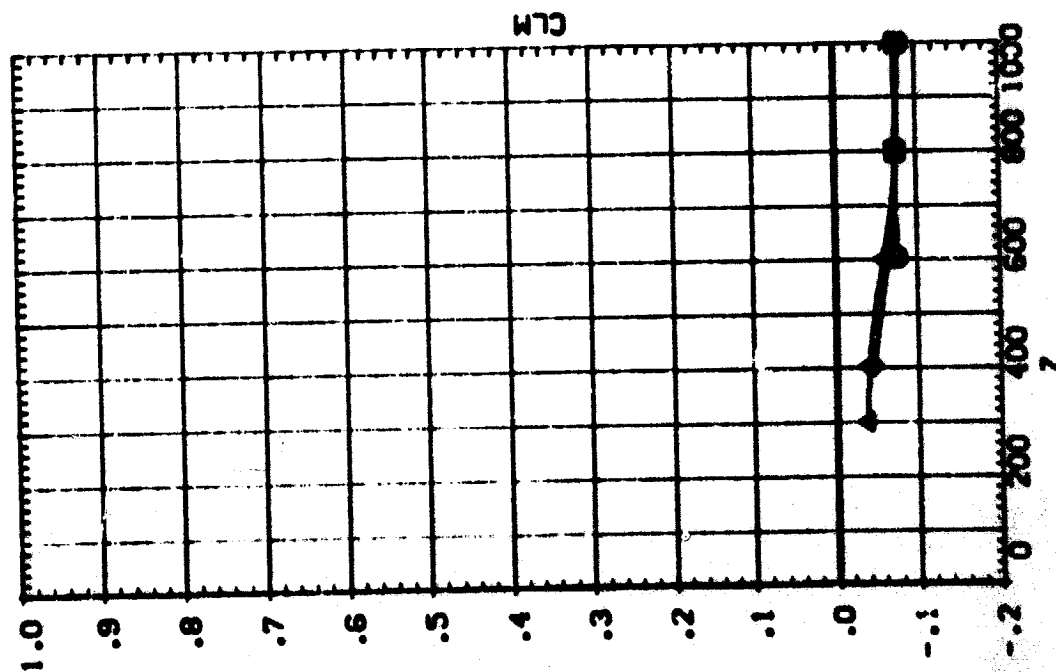
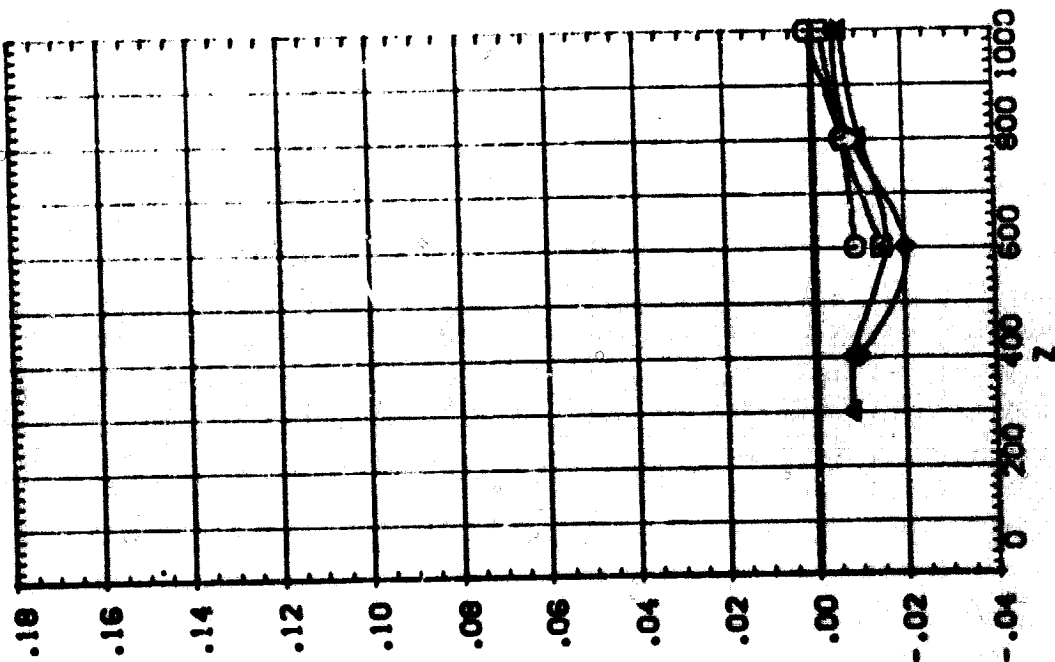


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SR8(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ412)

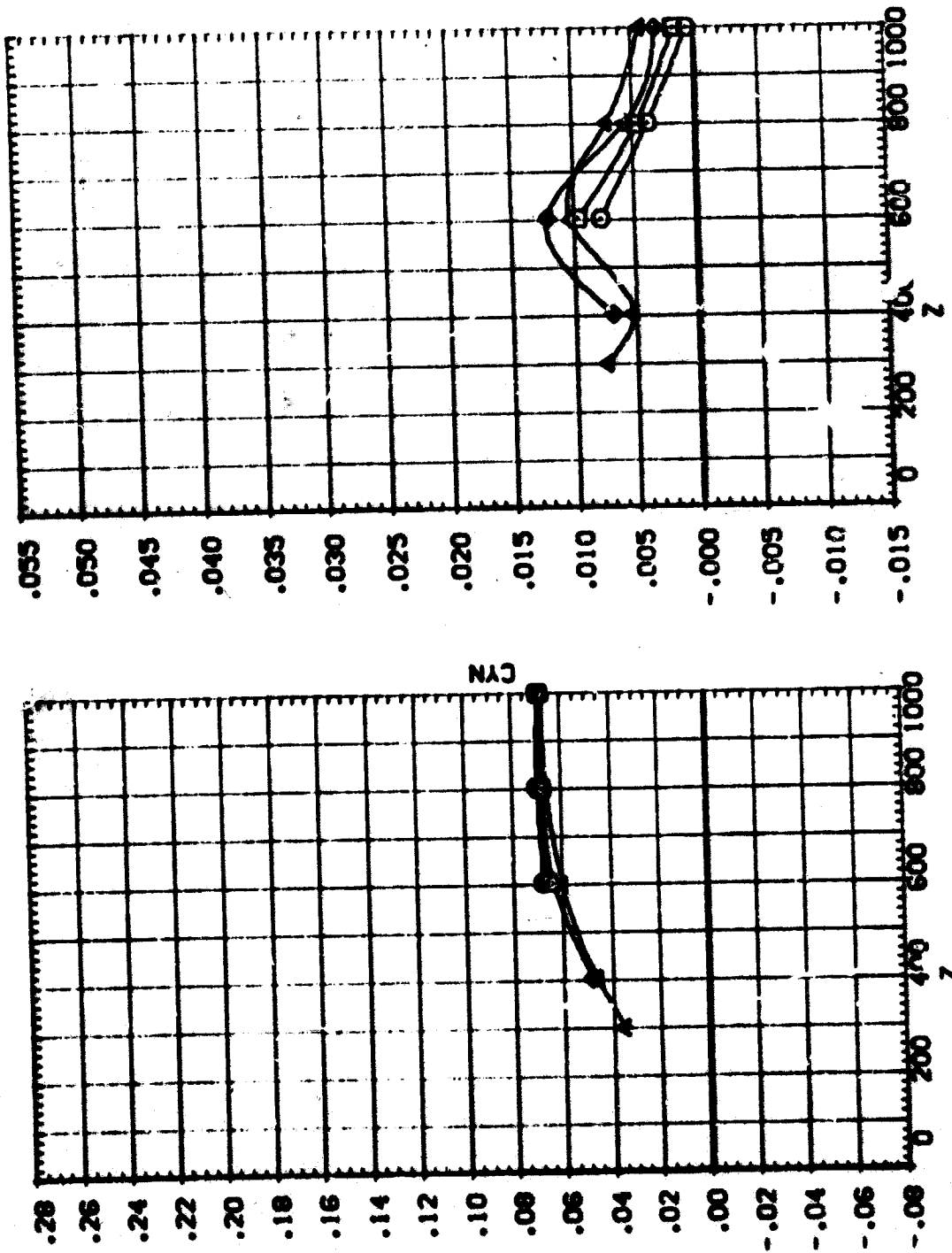
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS. ICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .523 | 4.530 | POTIAL 110.000 |
| □ | 300.470 | .000 | BETA .000 |
| ◇ | 600.710 | -10.000 | DBETA -10.000 |
| △ | 900.280 | .000 | POTIAL .000 |



X .573 MACH 4.330 PIVOTAL 110.000
 380.478 ALPHA .000 BETA .000
 800.710 DELTA -10.000 CDETA -10.000
 900.290 Y .000 POWER .000

SEE THE ASSOCIATED DATA
 ELEMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

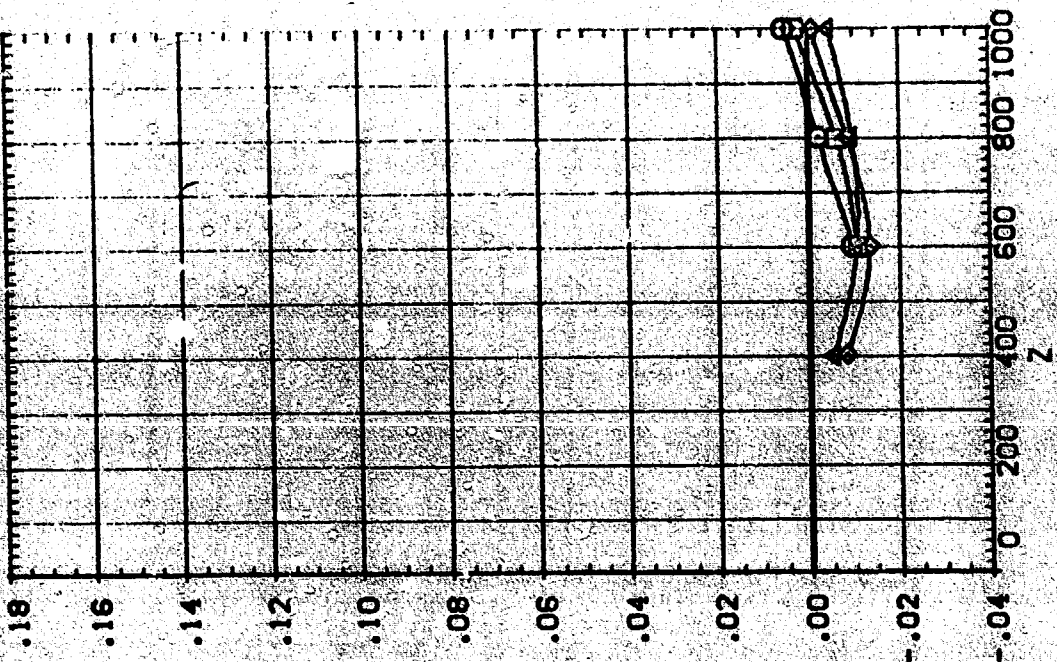
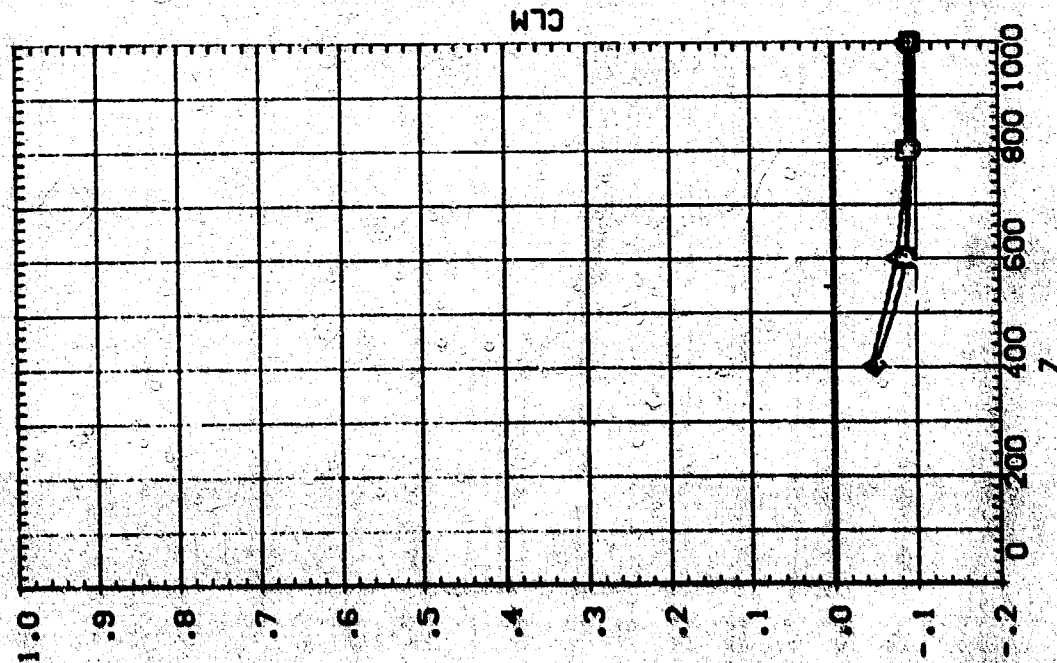


SR8 V/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ413)

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|--------|---------|--|
| | | | 1.530 | POTIAL | 110.000 | |
| ○ | 300.430 | ALPHA | .000 | BETA | .000 | |
| □ | 600.550 | DELTA | -10.000 | DBETA | -20.000 | |
| △ | 800.950 | Y | .000 | PC+MR | .000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



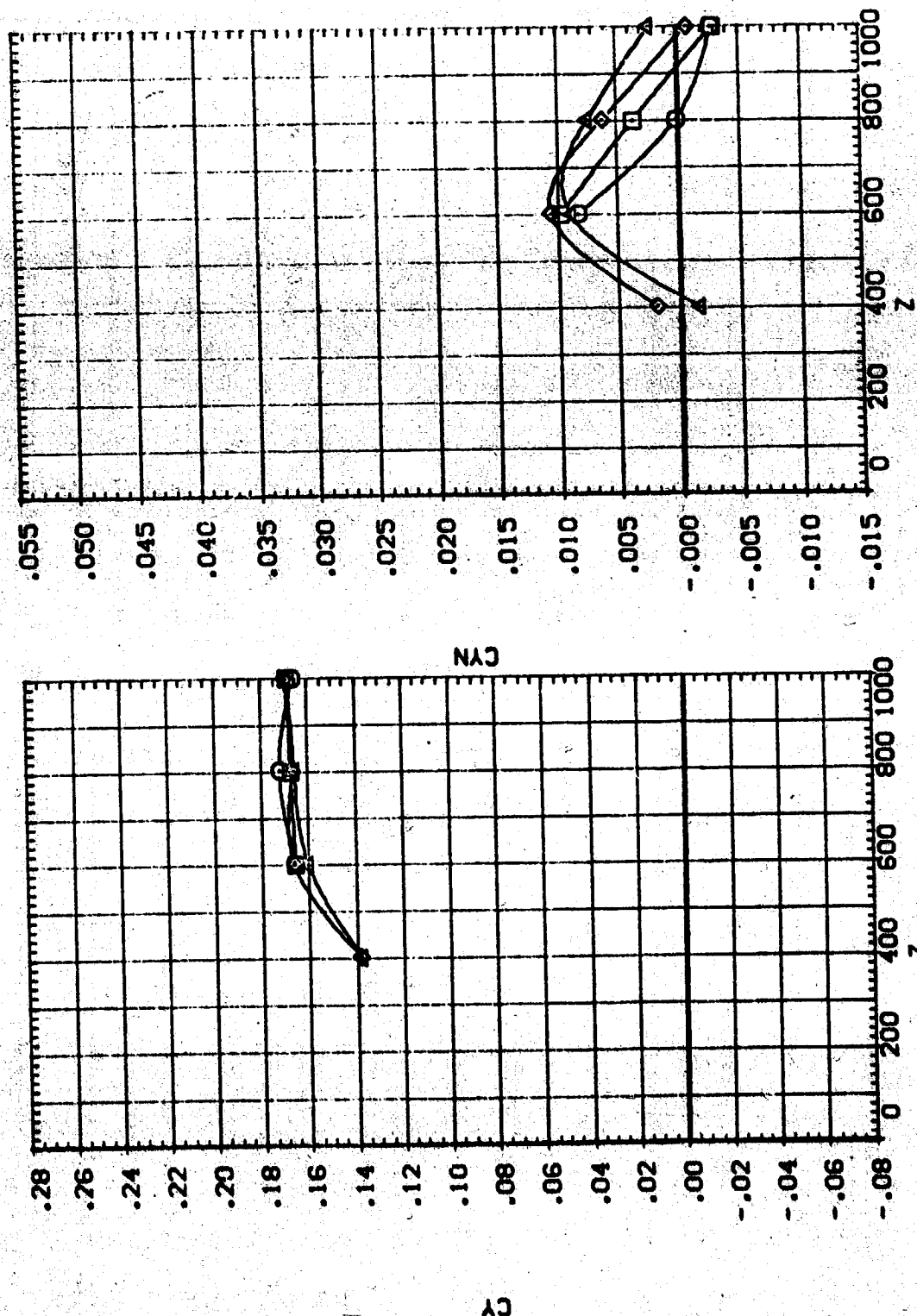
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ413)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

PARAMETRIC VALUES

| SYMBOL | X | MACH | ALPHA | BETA | DBETA | POWER |
|--------|---------|-------|-------|------|---------|-------|
| ○ | 300.430 | 4.530 | .000 | .000 | -10.000 | .000 |
| □ | 600.560 | 4.530 | .000 | .000 | -20.000 | .000 |
| △ | 899.950 | 4.530 | .000 | .000 | -20.000 | .000 |

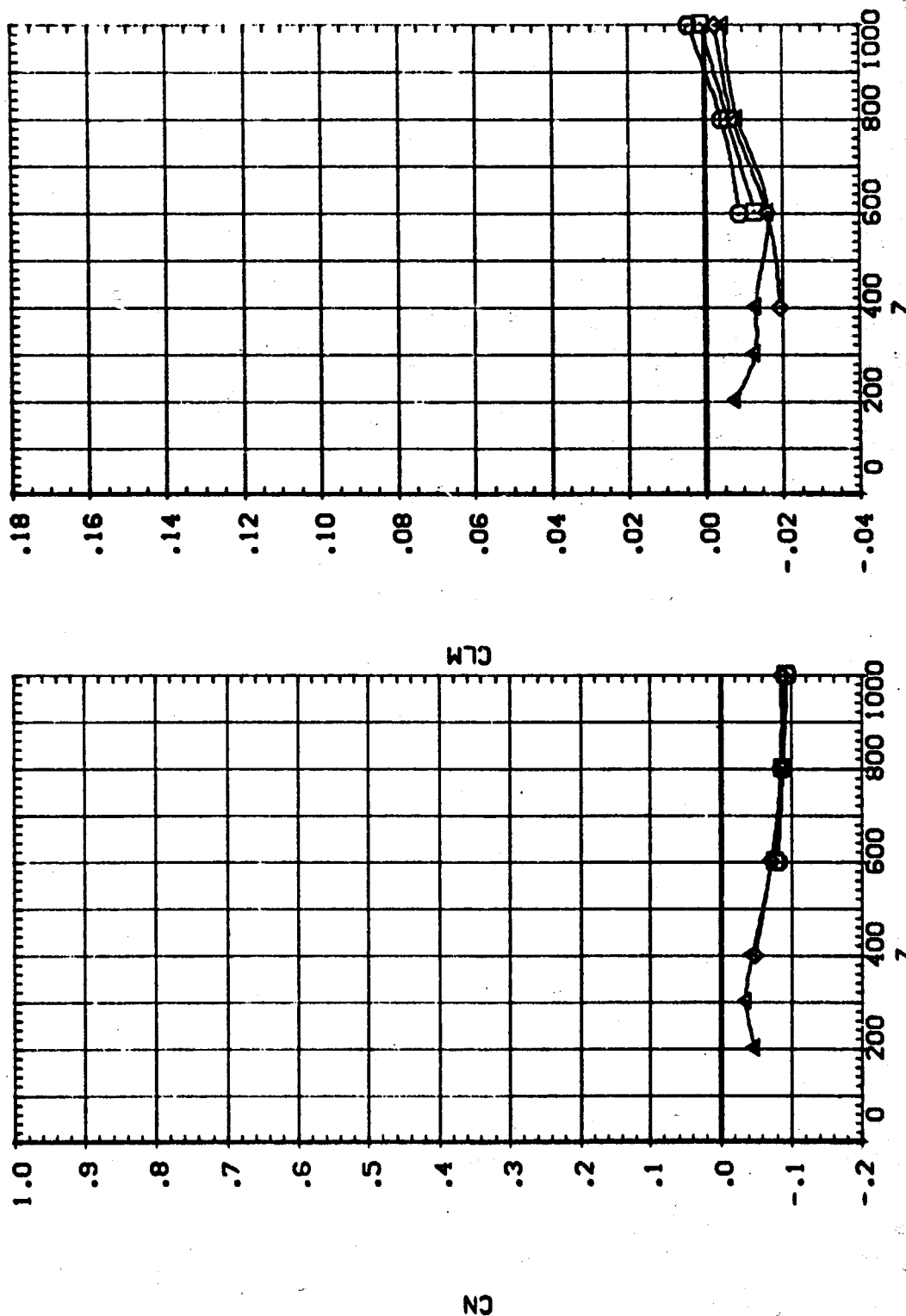


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ414)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|---------|
| | | MACH | 4.530 | P TOTAL | 110.000 |
| ○ | 300.430 | ALPHA | .000 | BETA | .000 |
| ◇ | 598.660 | DALPHA | -10.000 | DBETA | -20.000 |
| △ | 899.400 | Y | 200.000 | PC#BR | .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ414)

SYMBOL

X

○

□

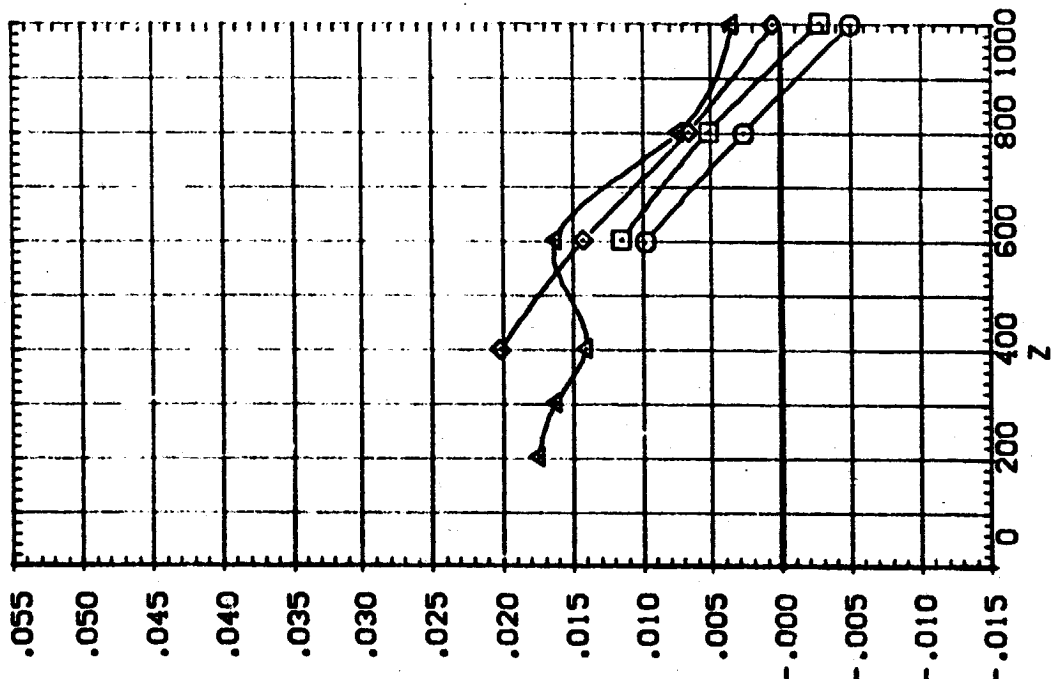
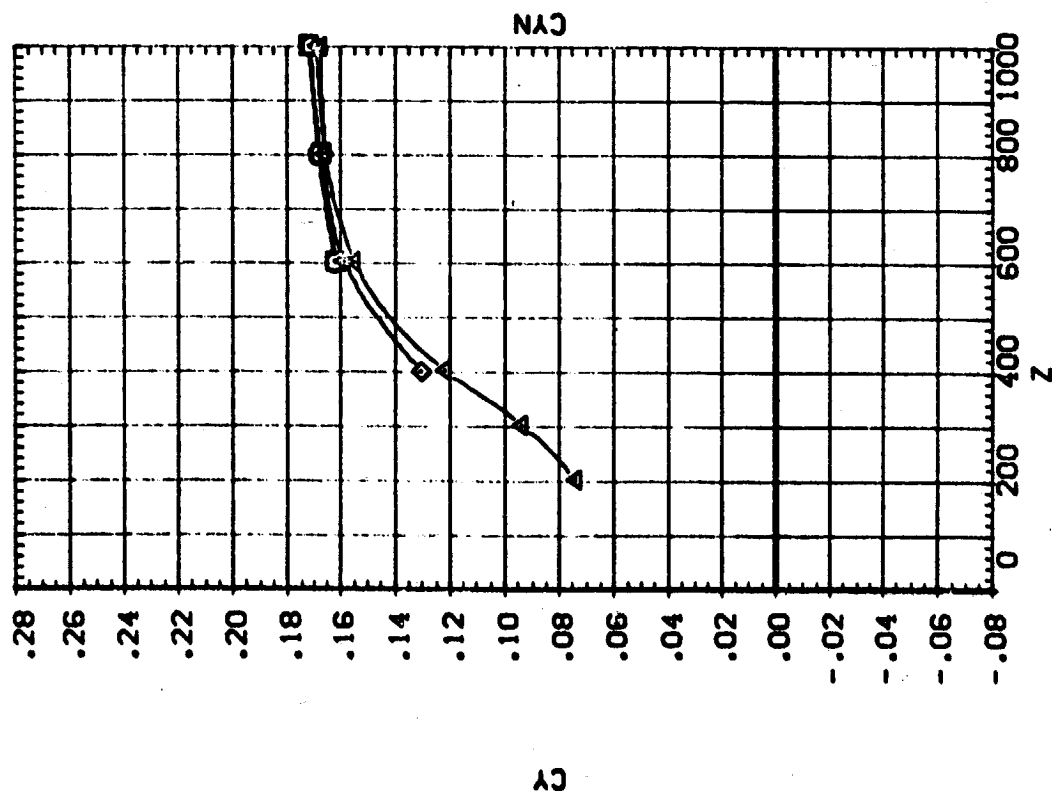
◇

△

PARAMETRIC VALUES

MAOH 110.000
 ALPMA .000
 DALPMA -20.000
 BETA .000
 DBETA -20.000
 PCFPR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

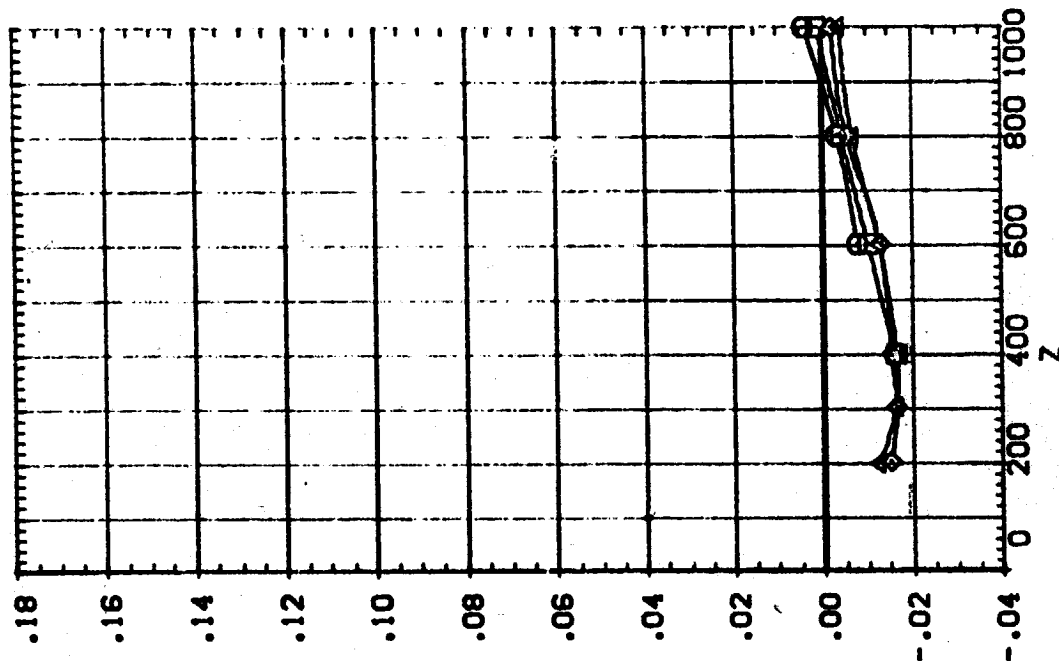
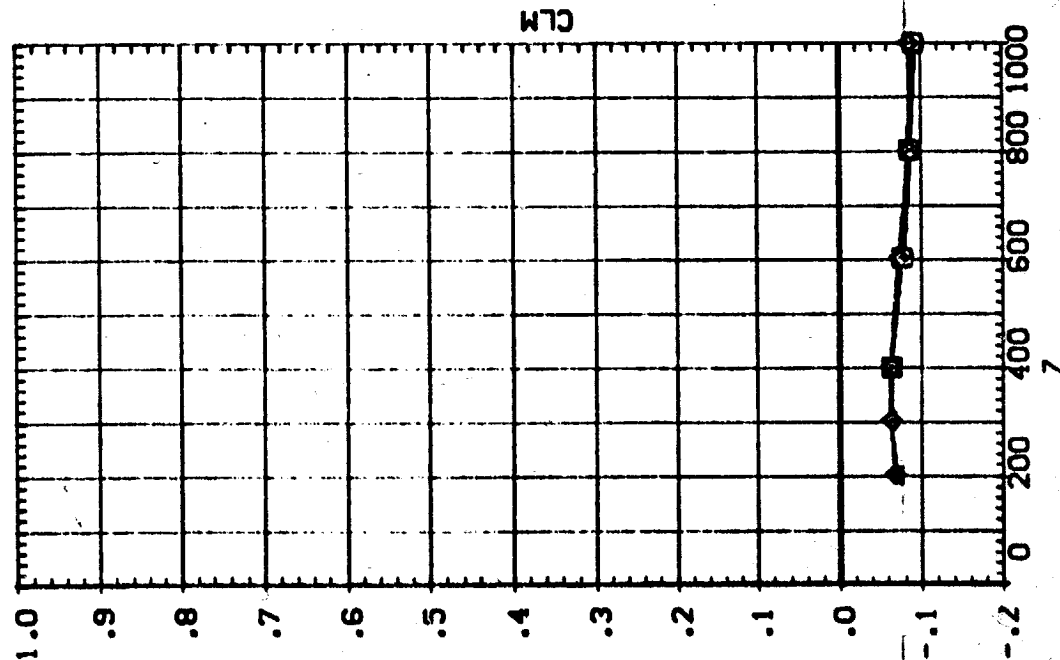


IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ415)

SYMBOL
○
□
◇
△

PARAMETRIC VALUES
X MACH TOTAL 110.000
299.860 ALPHA .000 BETA .000
600.710 D ALPHA -10.000 DBETA -20.000
899.520 PC+PB 400.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



3

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ415)

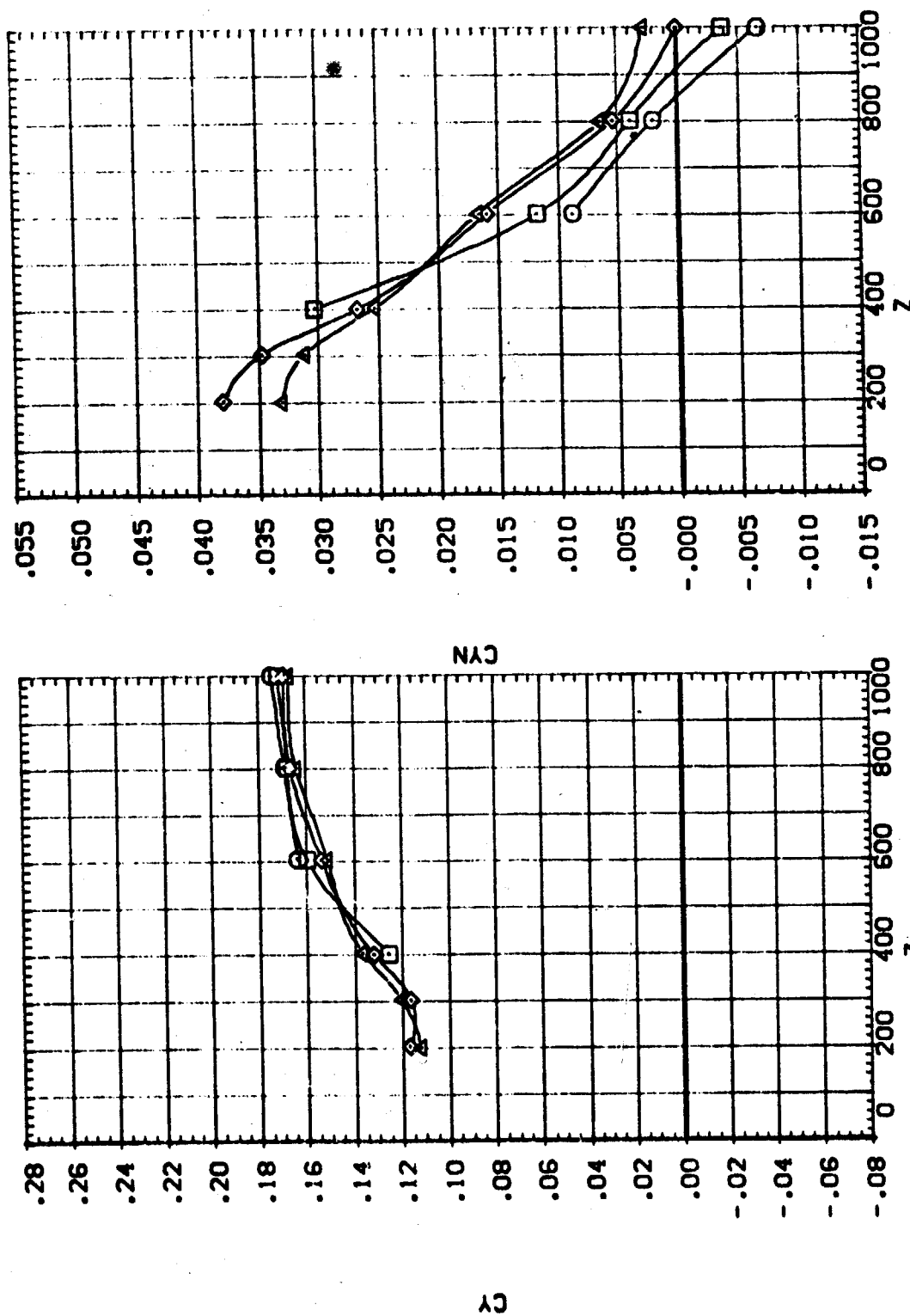
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

PARAMETRIC VALUES

| PARAMETER | VALUE | UNIT |
|-----------|---------|--------|
| MACH | 4.530 | P10TAL |
| ALPHA | .000 | BETA |
| DALPHA | -10.000 | BETA |
| Y | 400.000 | PC+R |
| PC+R | .000 | |

SYMBOL

| | |
|---|---------|
| ○ | 299.860 |
| □ | 600.710 |
| ◇ | 899.920 |



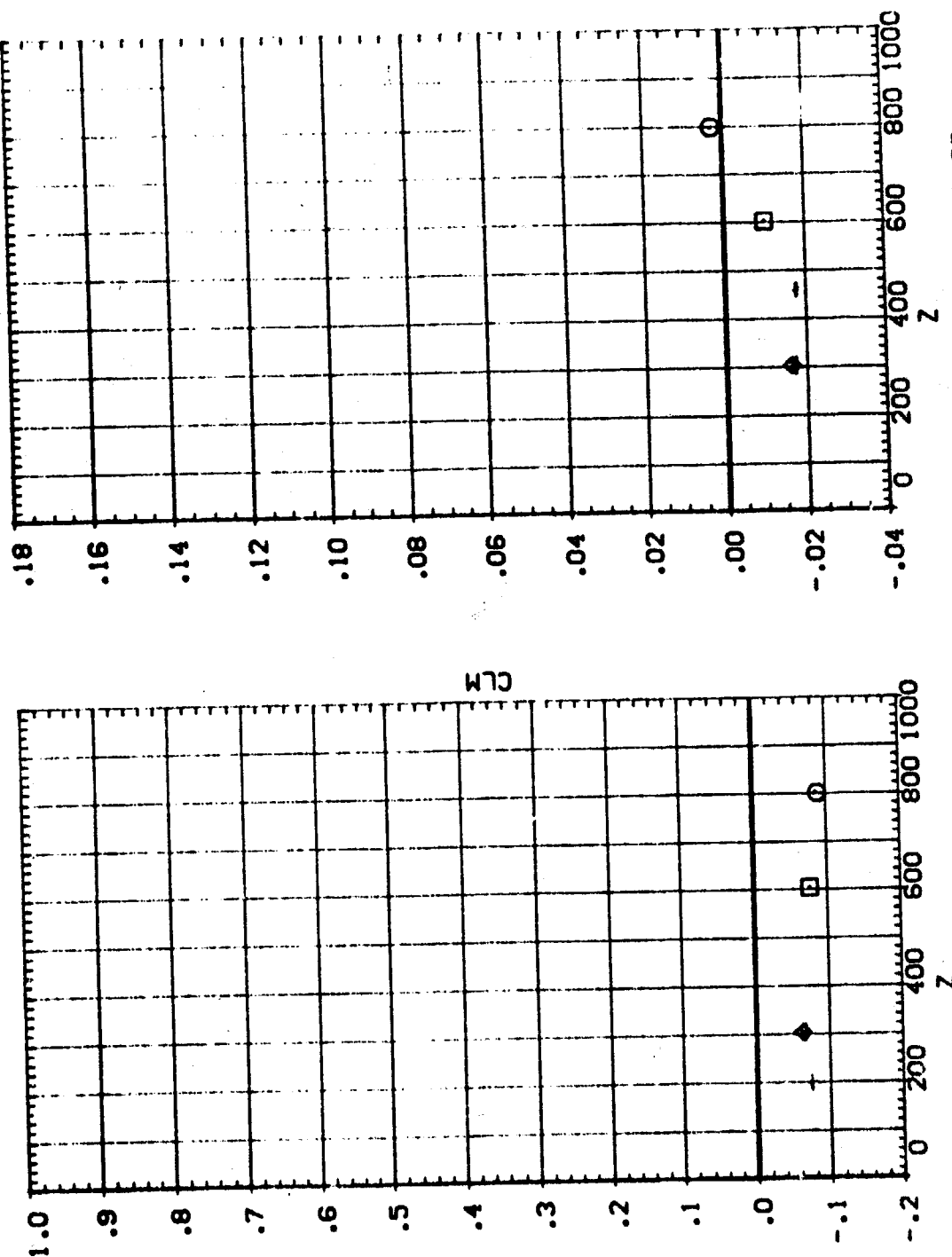
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

Q=

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ4116)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | 300.470 | ALPHA | .000 | BETA | .000 |
| □ | 600.170 | DALPHA | -10.000 | DBETA | -20.000 |
| ◇ | 900.790 | | 800.000 | PC-MFR | .000 |

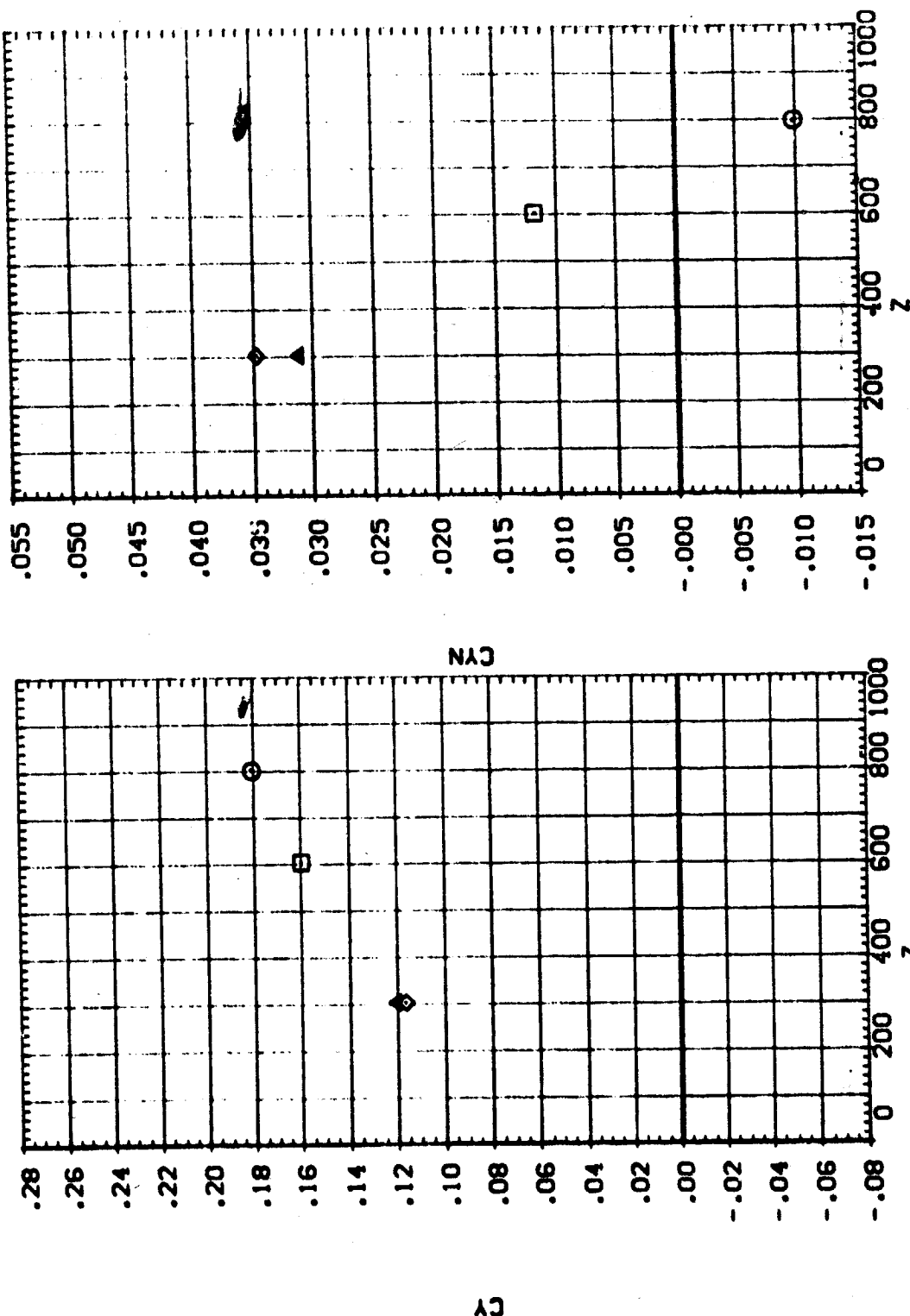


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM SRB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ416)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA'S

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|---------|--|
| | | MACH | PTOTAL | 110.000 | |
| ○ | -0.666 | 4.530 | BETA | .000 | |
| □ | 300.470 | .000 | DBETA | -20.000 | |
| ◇ | 600.170 | -10.000 | PO#SR | .000 | |
| △ | 900.840 | 800.000 | | | |

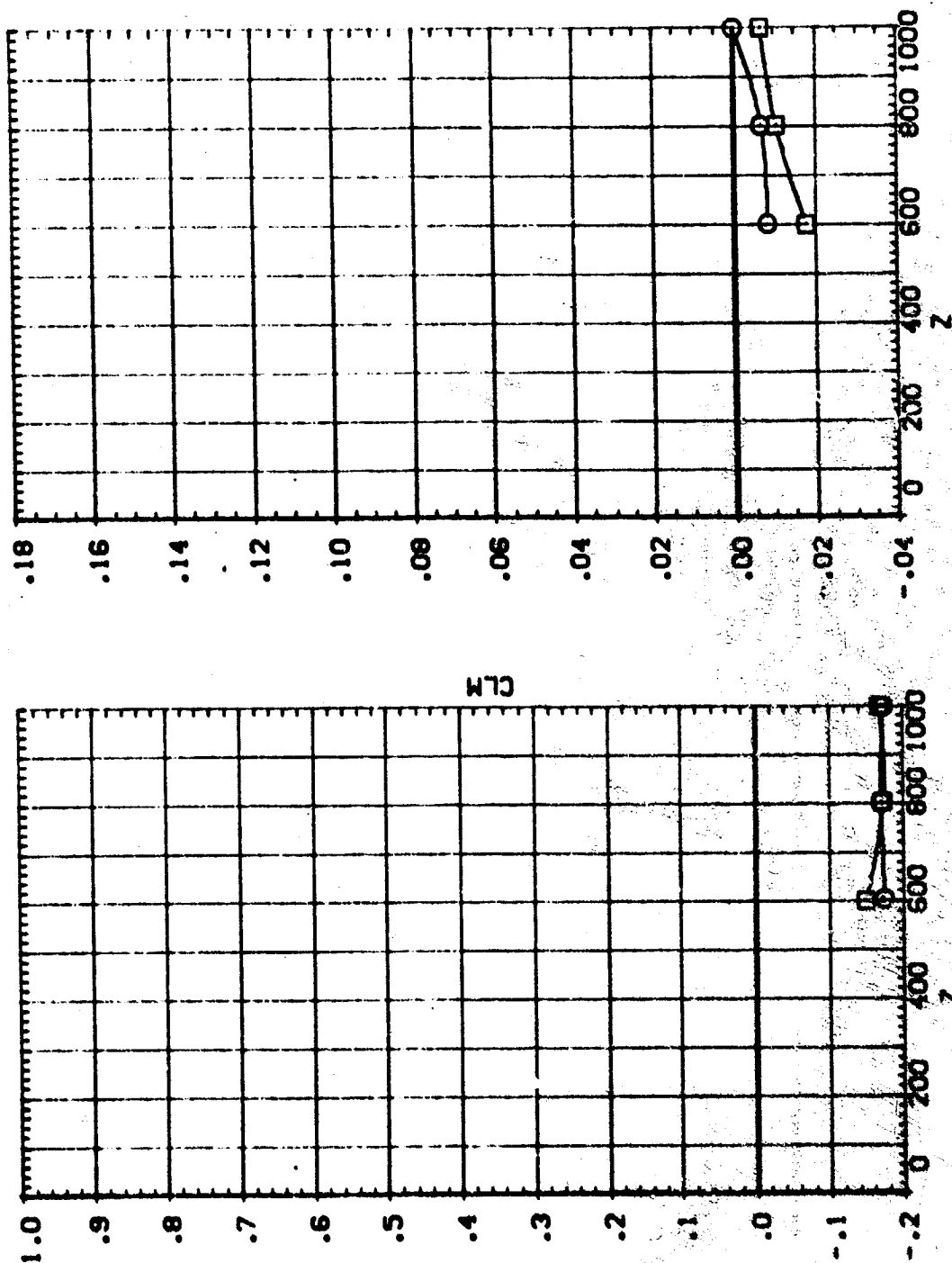


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ417)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

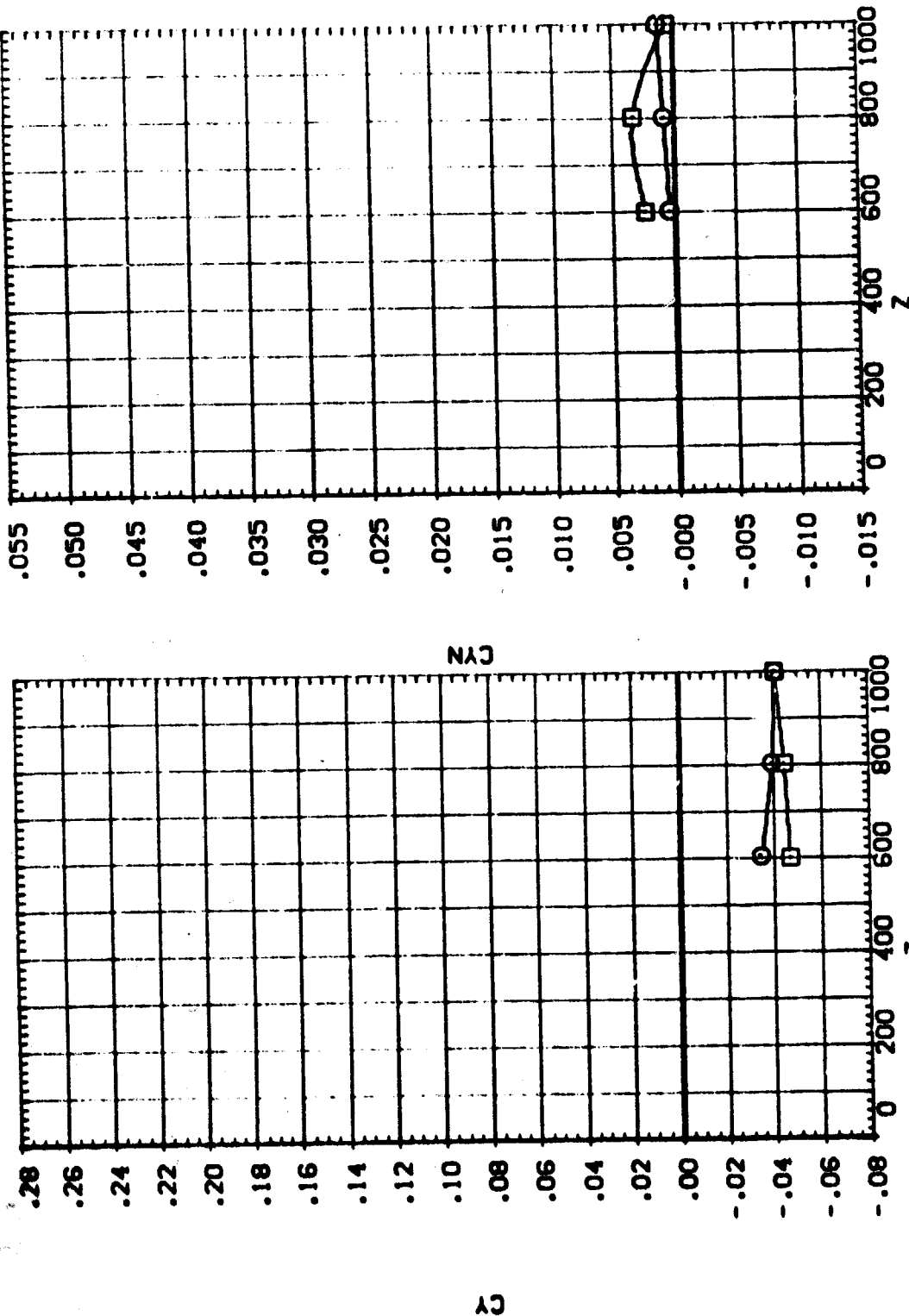
| | | | |
|--------|---------|------|----------------------|
| SYMBOL | X | MACH | PARAMETRIC VALUES |
| ○ | 900.200 | .467 | 4.530 PTOTAL 110.000 |
| □ | | | .000 BETA .000 |
| | | | -20.000 DBETA 5.000 |
| | | | .000 POWER .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X .567 MACH 4.530 PTOTAL 110.000
200.200 ALPHA .000 BETA .000
DALPHA -20.000 DBETA 5.000
V POWER .000

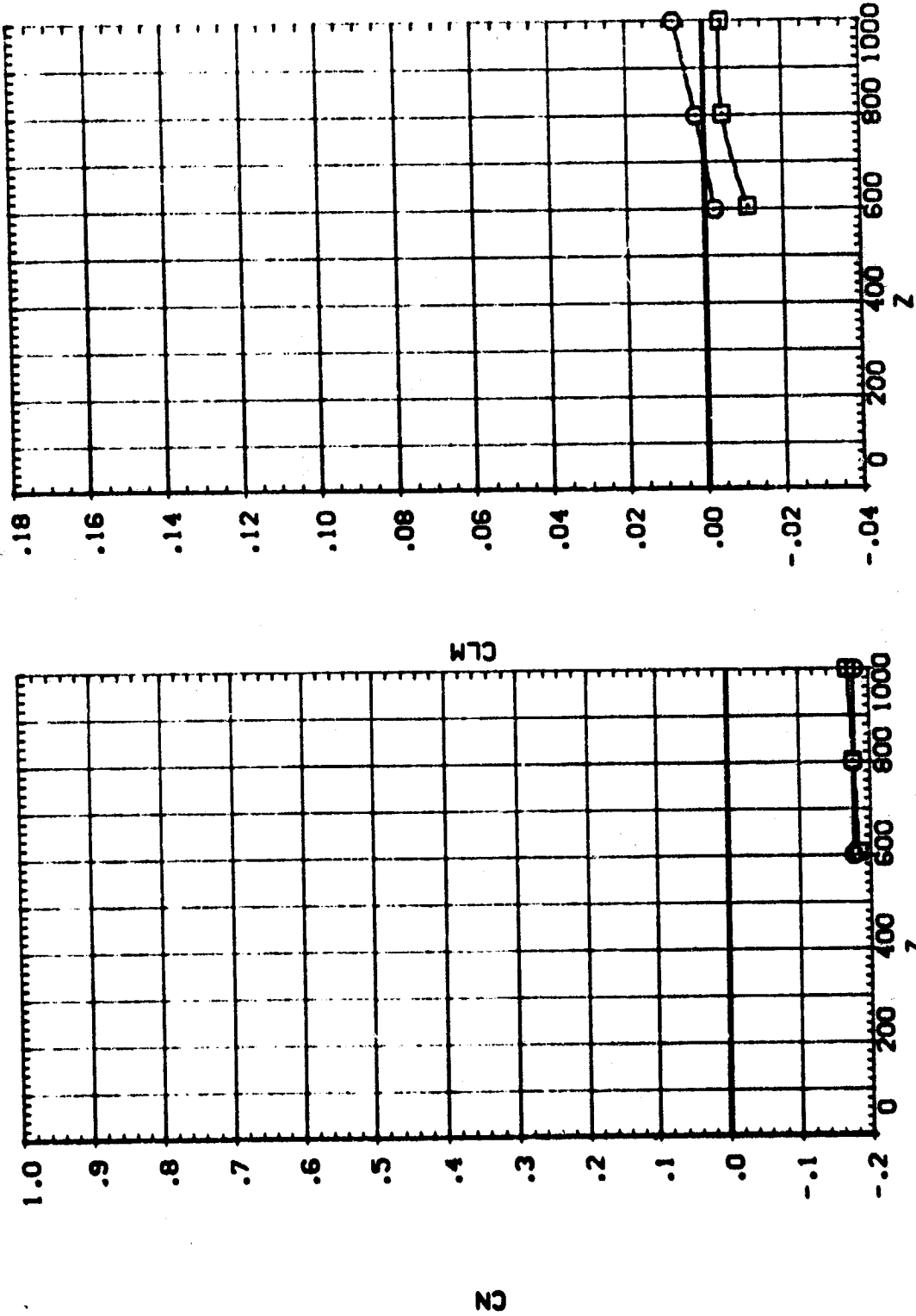


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10
PAGE 1046

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ418)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|--------|
| | | MAC-H | PTOTAL | BETA | PC-MBR |
| ○ | -.262 | .000 | 110.000 | .000 | .000 |
| □ | 901.280 | -20.000 | 5.000 | 5.000 | .000 |



1A13 SR8(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ418)

SYMBOL
☐ ☐

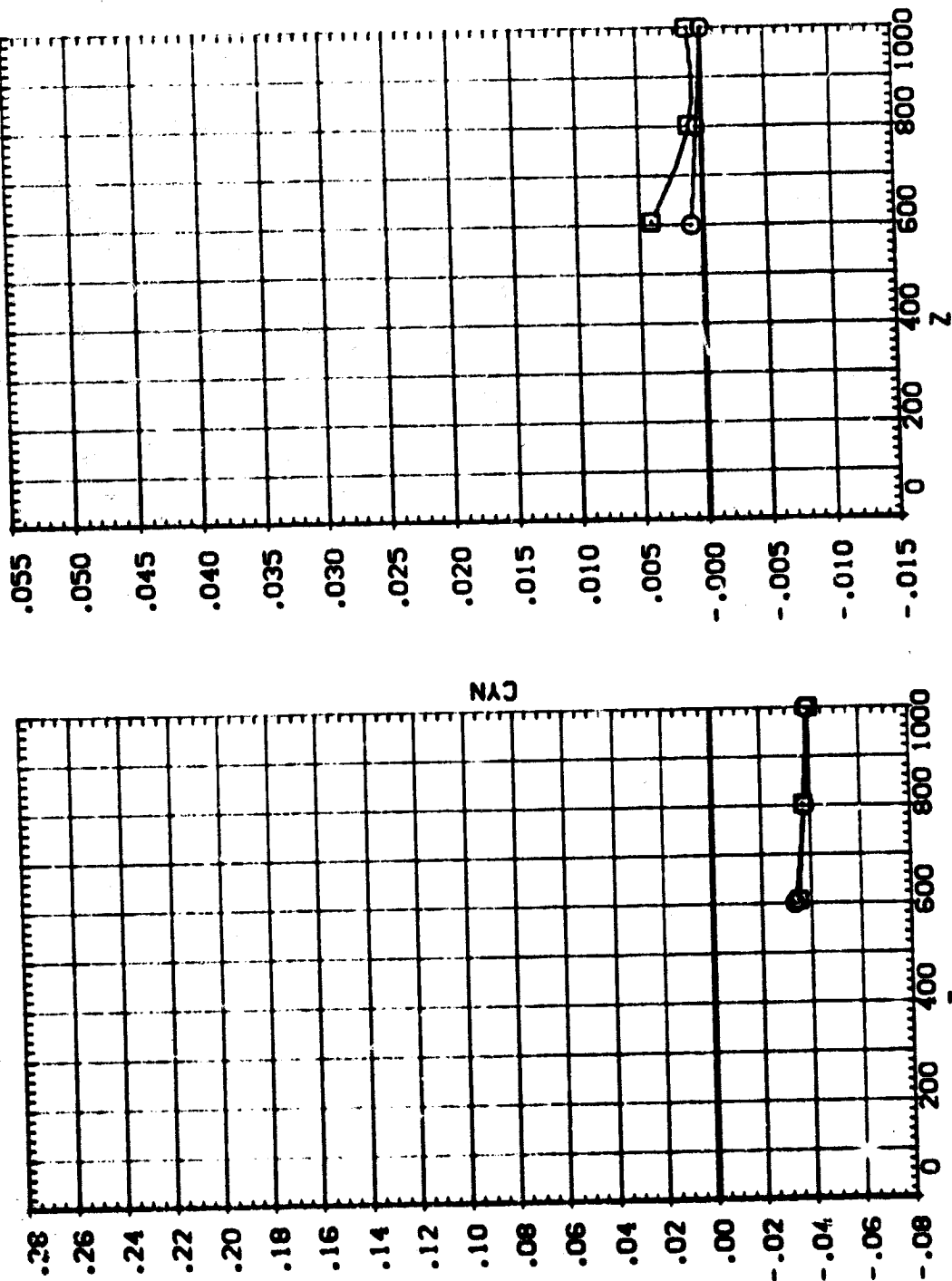
X
 -.282
 501.280

MACH
 ALPHA
 DYNAMIC
 V

PARAMETRIC VALUES
 4.530 TOTAL
 .000 BETA
 -20.000 CSETA
 200.000 POWER

110.000
 .000
 5.000
 .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

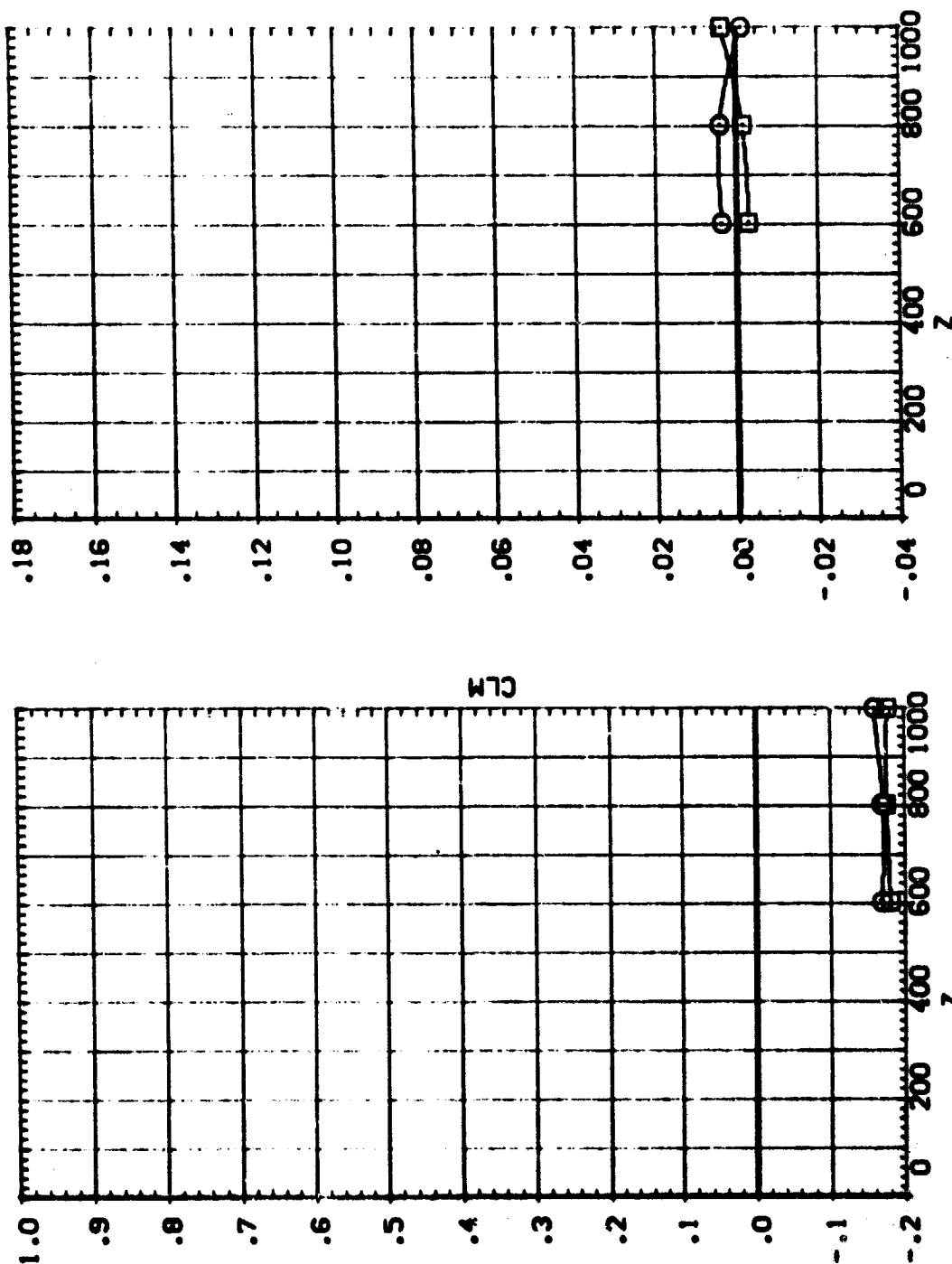


SR8 W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET
 PAGE 1048

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09110 (RTJ419)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

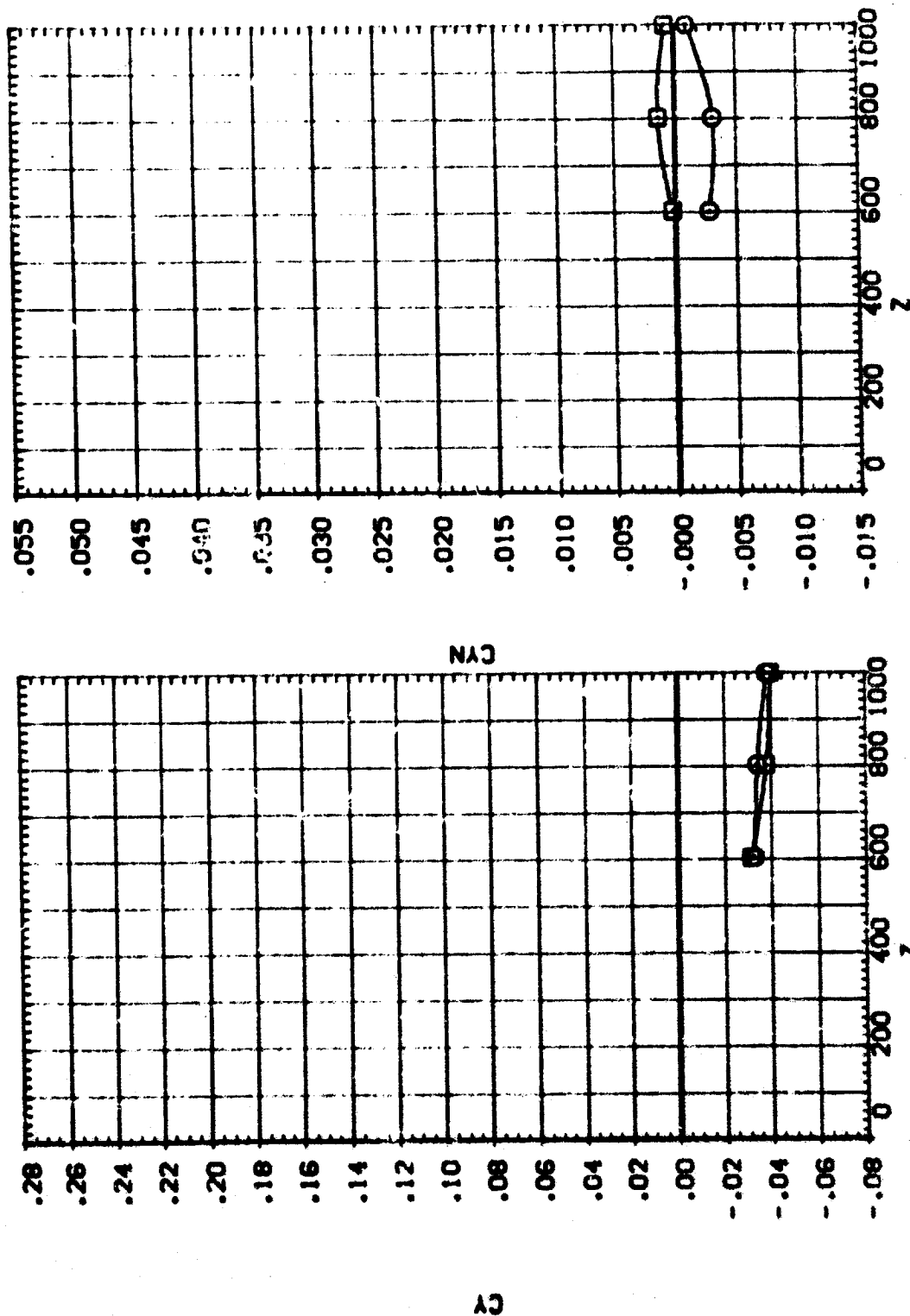
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| □ | 800.800 | ALPHA | .000 | BETA | .000 | |
| ○ | | DALPHA | -20.000 | DBETA | 5.000 | |
| | | Y | 400.000 | POWER | .000 | |



IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ419)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X
☐ 800.800
☐ 110.000
 PARAMETRIC VALUES
 4.530 P10TAL
 .000 SETA
 -20.000 DBETA
 400.000 PC-40R
 110.000
 .000
 9.000
 .000

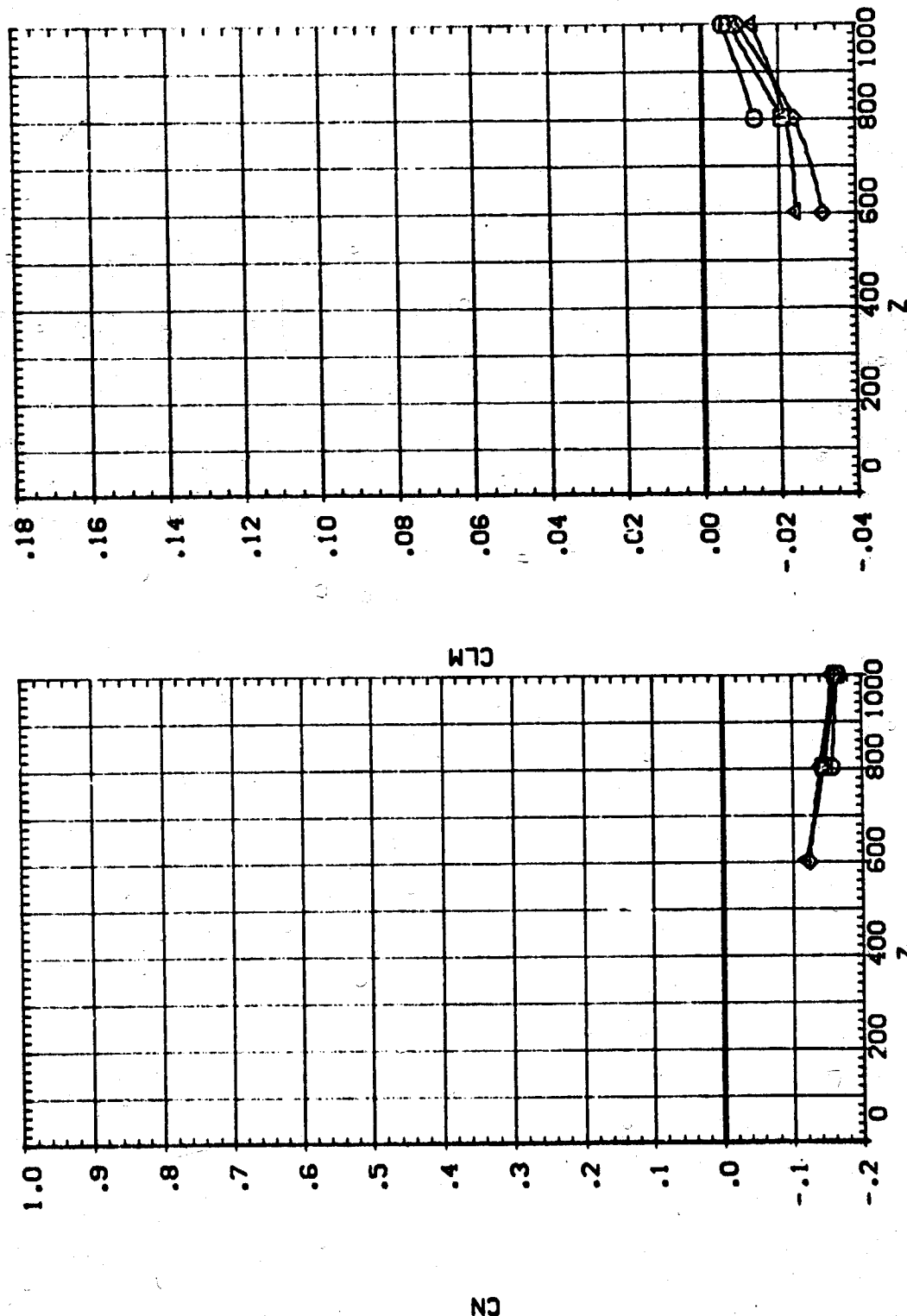


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ420)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

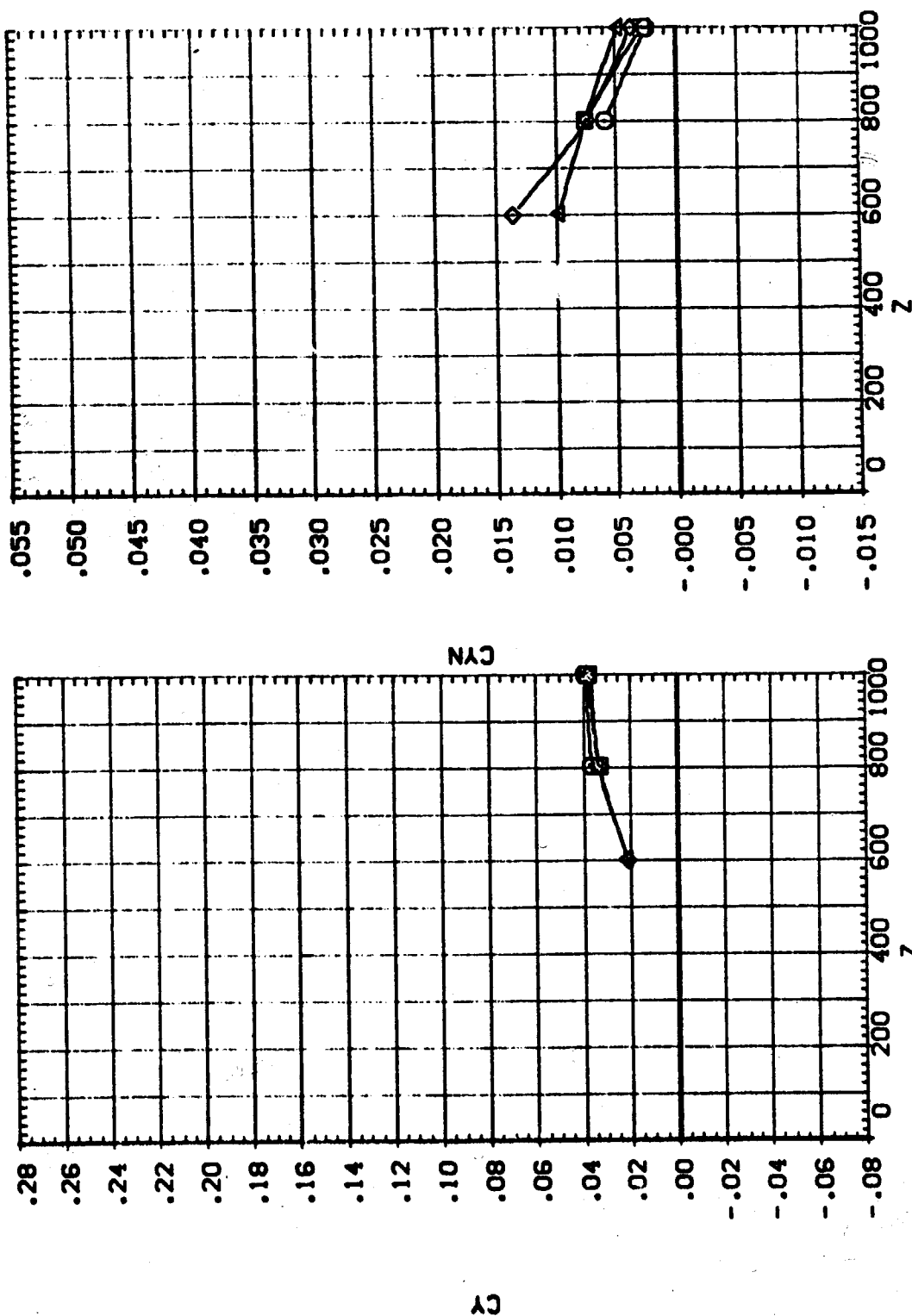
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|-------|-------|
| | | MACH | PTOTAL | BETA | DBETA | PC+PR |
| □ | .590 | 4.530 | 110.000 | .000 | .000 | .000 |
| ◇ | 300.870 | .000 | .000 | .000 | .000 | .000 |
| ◇ | 600.220 | -20.000 | .000 | .000 | .000 | .000 |
| △ | 900.630 | .000 | .000 | .000 | .000 | .000 |



IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ420)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .590 | 4.530 | PTOTAL 110.000 |
| □ | 300.870 | .000 | BETA .000 |
| ◇ | 600.220 | -20.000 | DBETA -5.000 |
| △ | 900.630 | .000 | PC46R .000 |

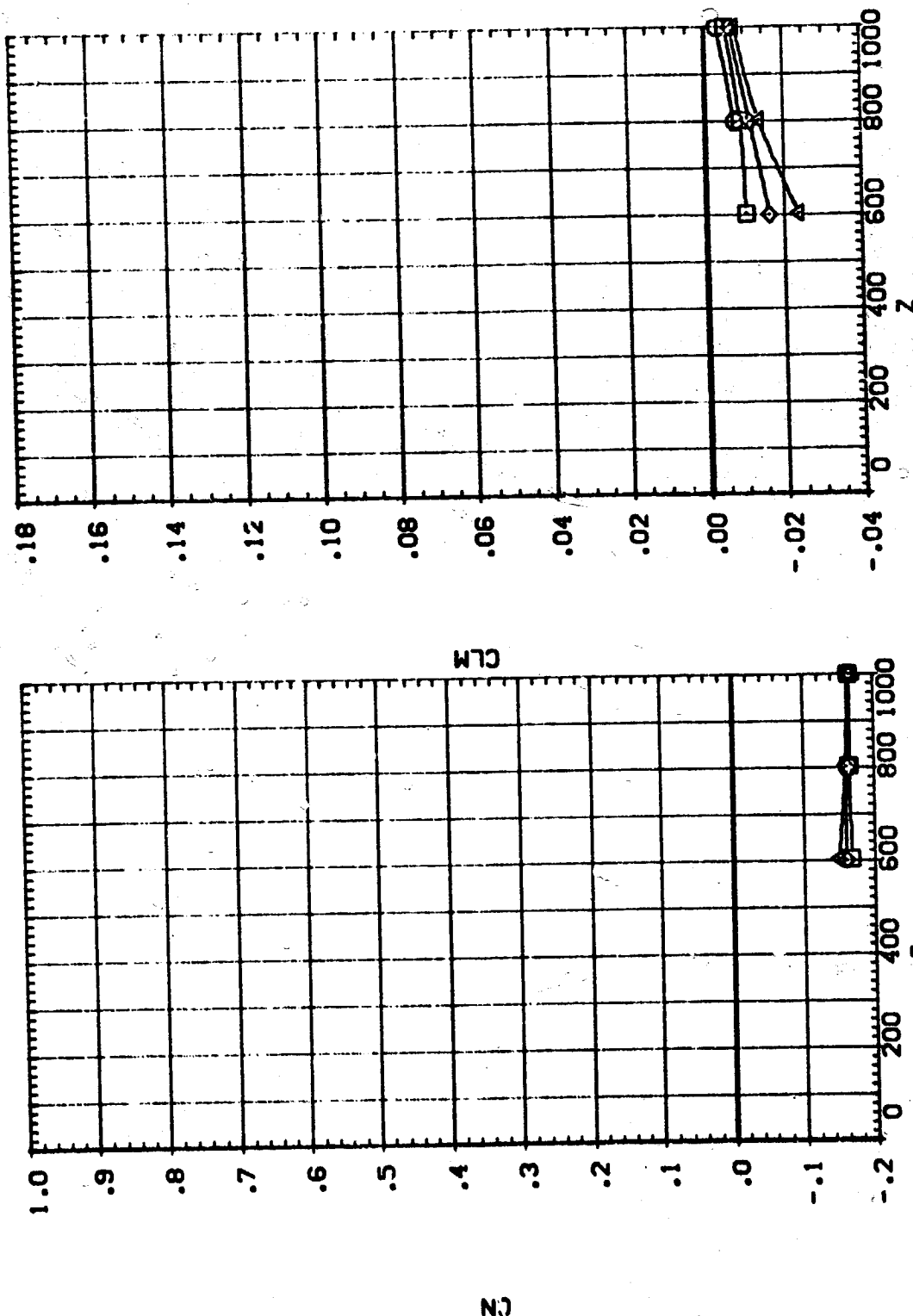


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ421)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|---------|---------|--|
| | | | 4.530 | P TOTAL | 110.000 | |
| □ | 300.670 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.280 | DALPHA | -20.000 | DBETA | -5.000 | |
| △ | 900.950 | Y | 200.000 | PC+PBR | .000 | |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

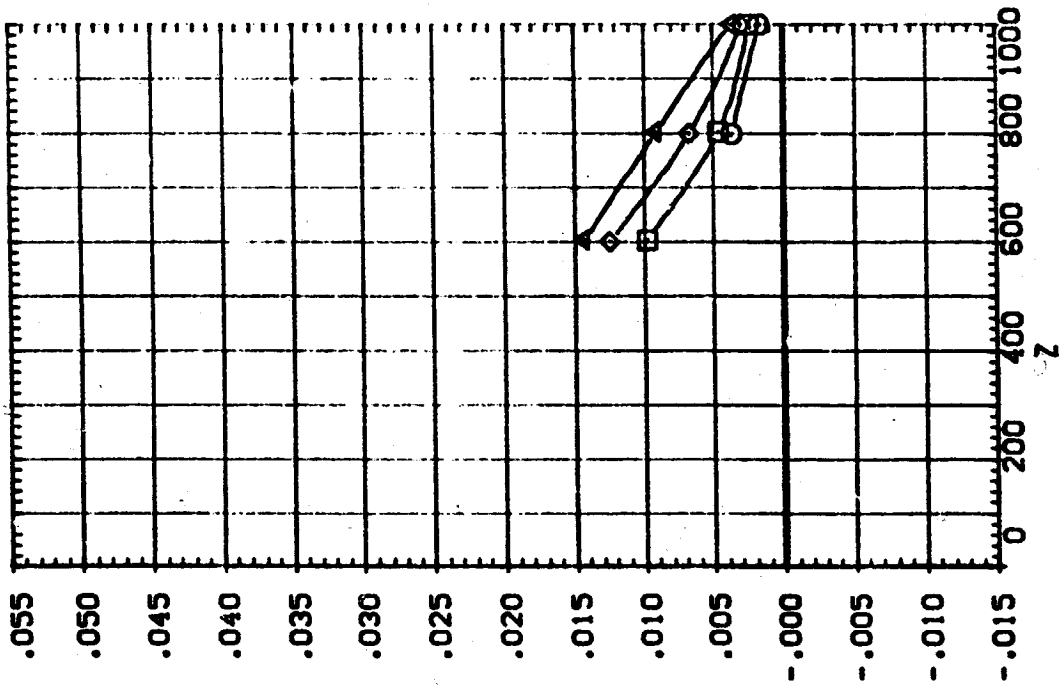
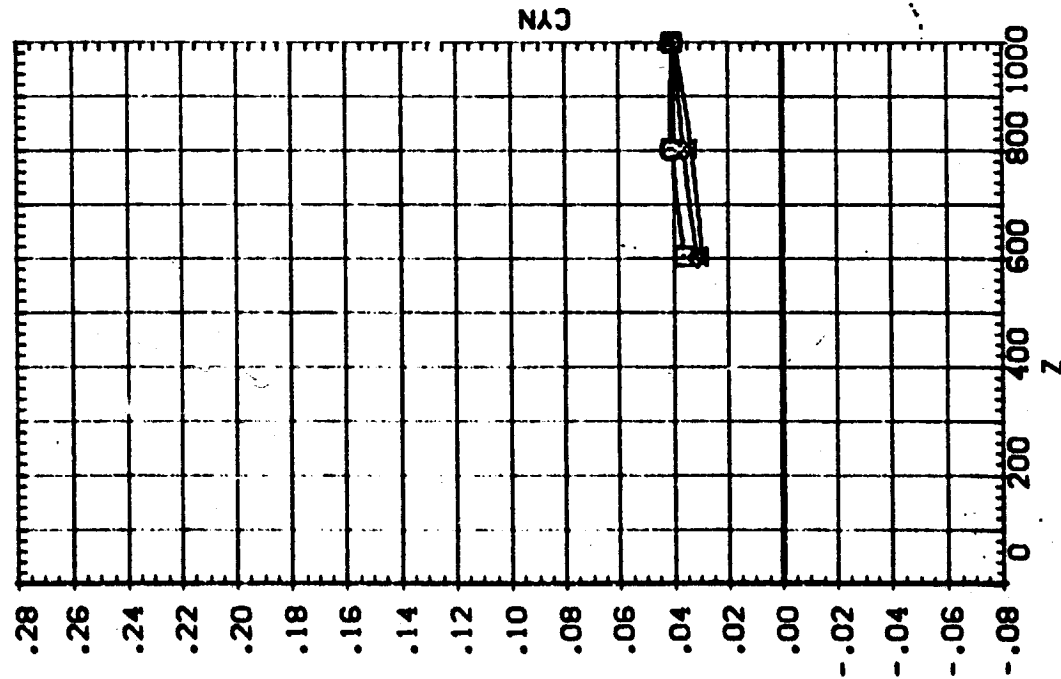
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| X | MACH | PTOTAL | BETA | DETA | POWER |
|---------|---------|---------|------|--------|-------|
| .051 | 4.530 | 110.000 | .000 | -5.000 | .000 |
| 300.670 | .000 | .000 | .000 | .000 | .000 |
| 600.280 | -20.000 | 200.000 | .000 | .000 | .000 |
| 900.950 | .000 | .000 | .000 | .000 | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

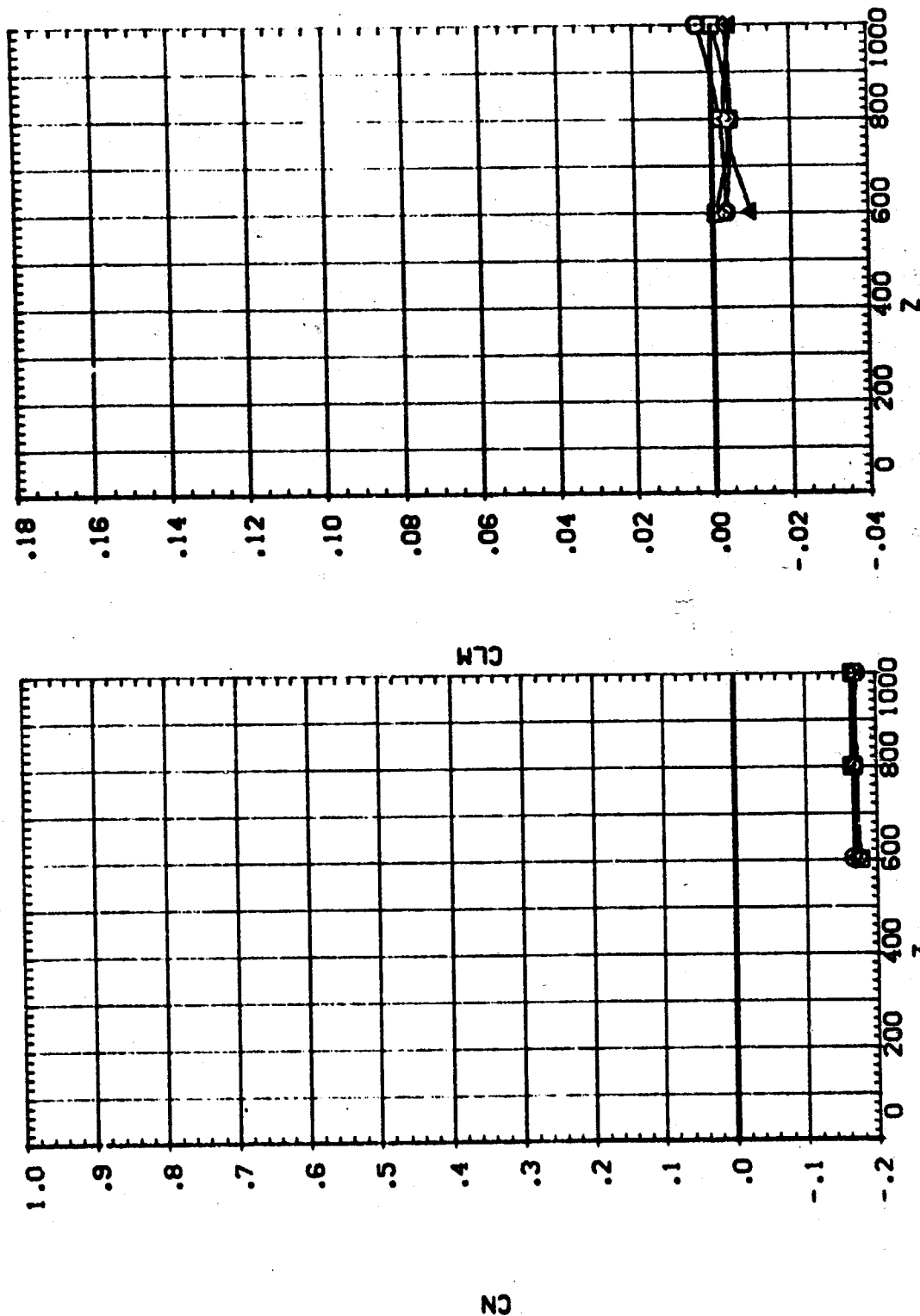


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ422)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

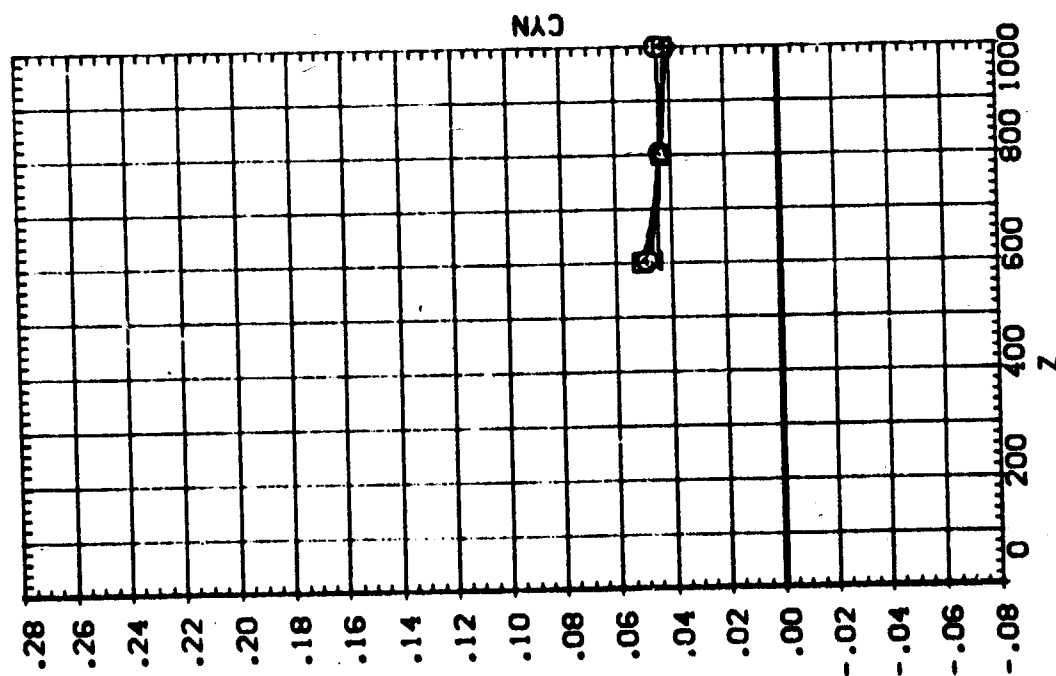
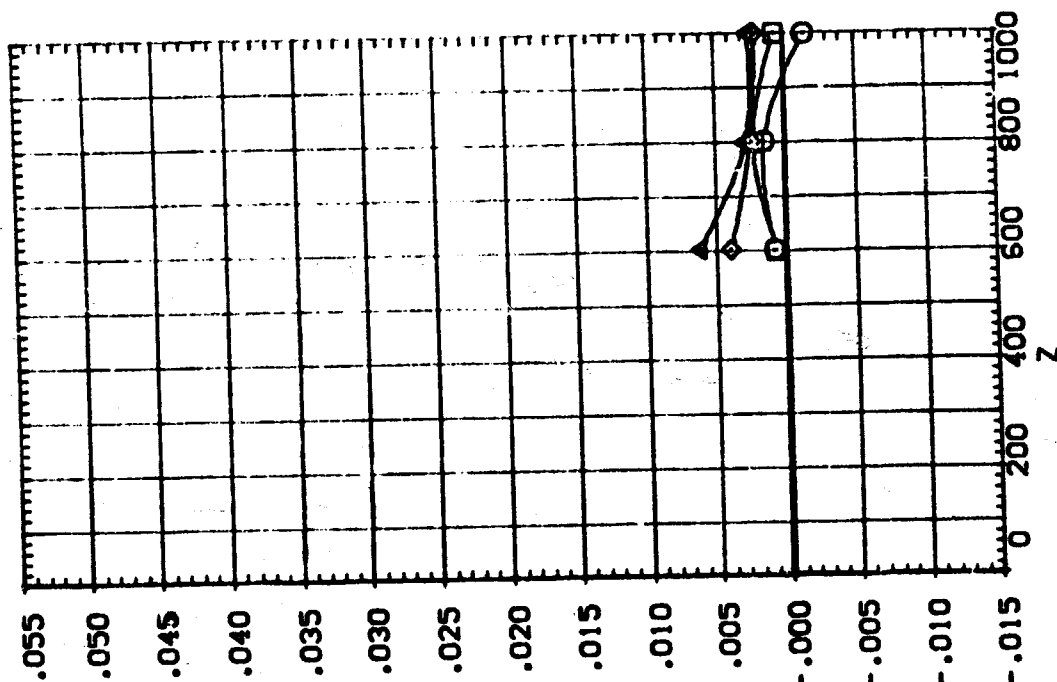
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | POTIAL | 110.000 | |
| ○ | 300.020 | ALPHA | .000 | BETA | .000 | |
| □ | 600.770 | DALPHA | -20.000 | DBETA | -5.000 | |
| ◇ | 900.750 | Y | 400.000 | PC+BR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ422)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PITOT | 110.000 |
| ○ | 300.020 | ALPHA | .000 | BETA | .000 |
| ◻ | 600.770 | DALPHA | -20.000 | DBETA | -5.000 |
| ◊ | 900.750 | Y | 400.000 | PC-MBR | .000 |

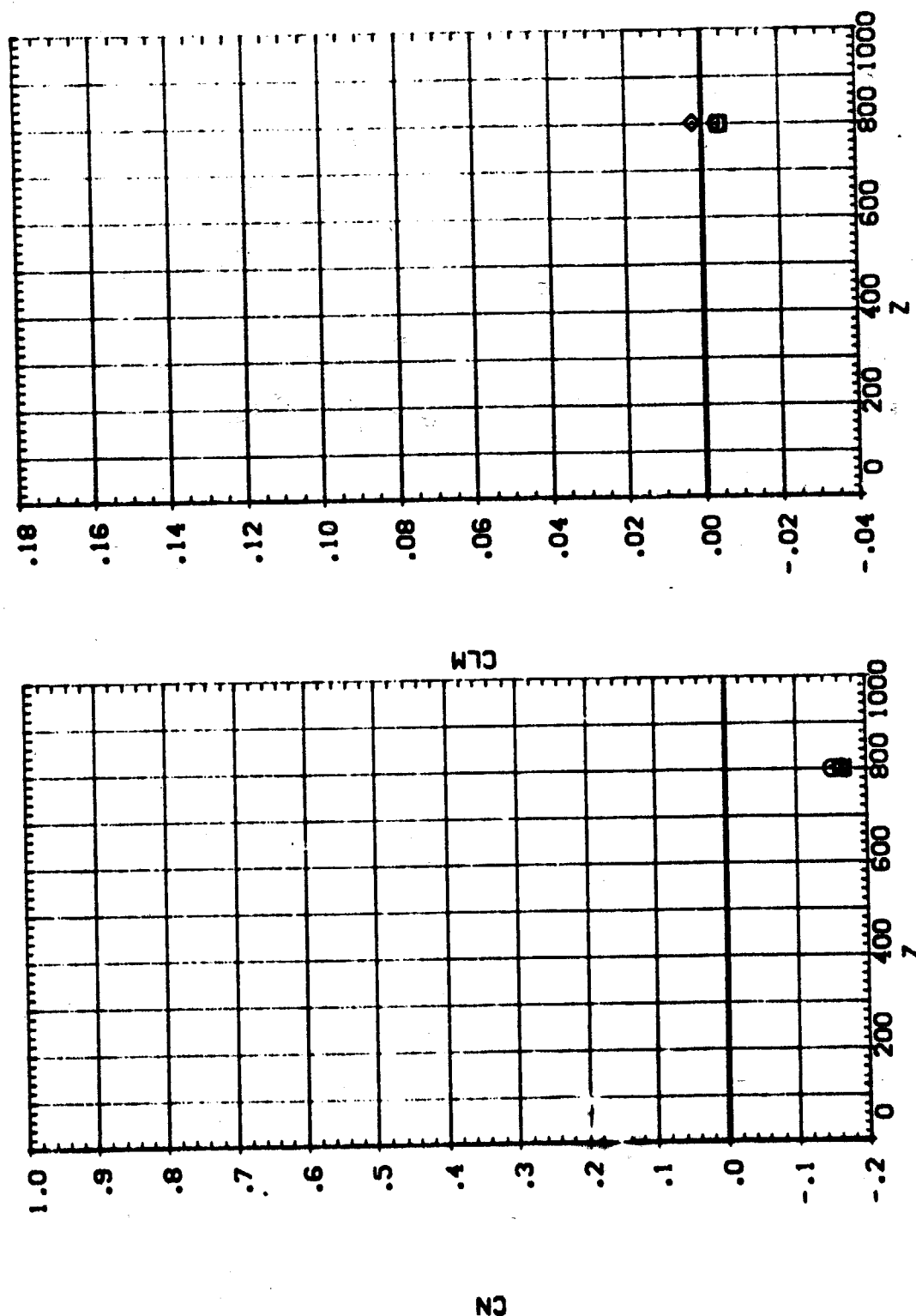


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ423)

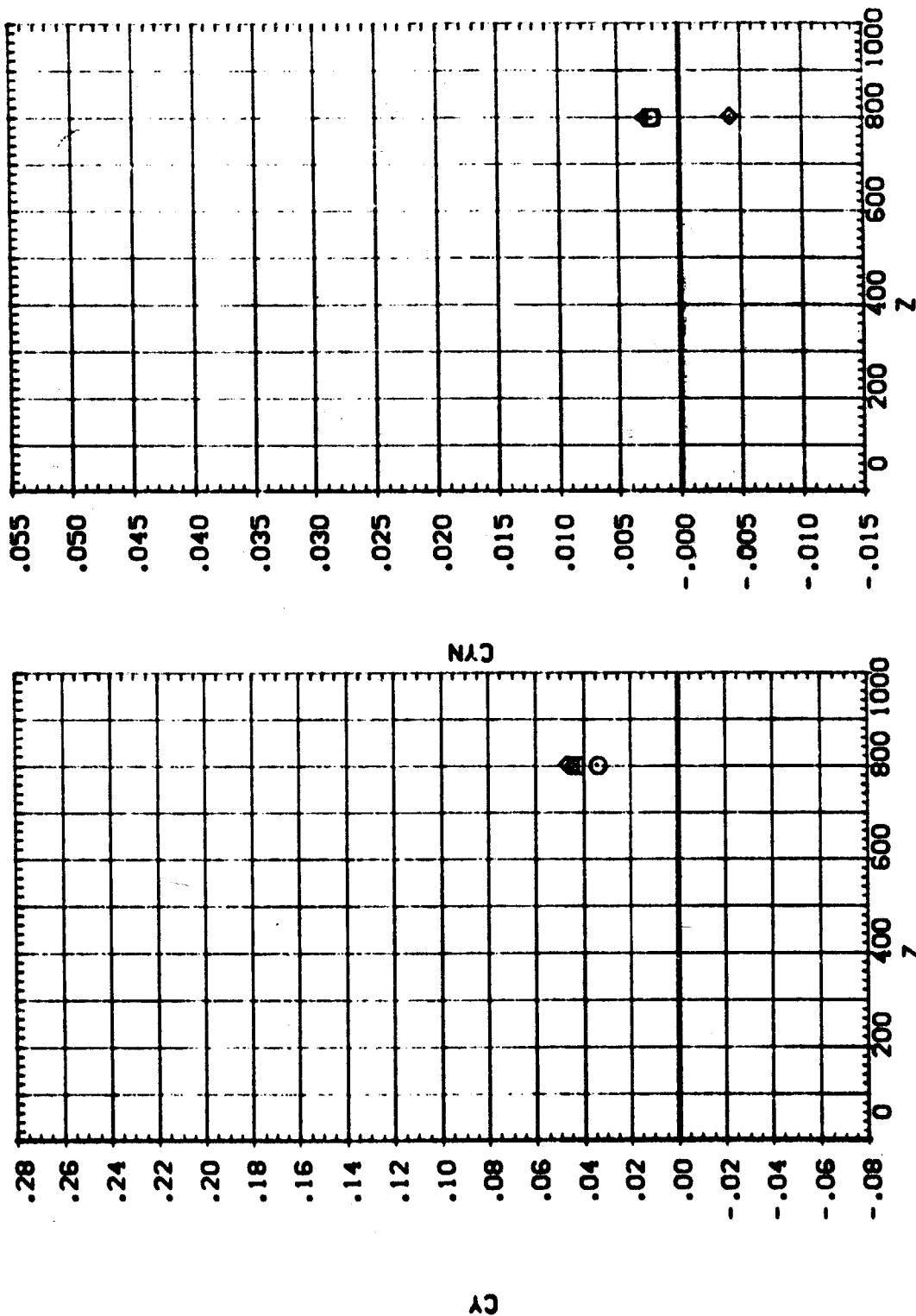
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MICH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.150 | ALPHA | .000 | BETA | .000 | |
| □ | 600.630 | DELTA | -20.000 | DBETA | -5.000 | |
| △ | 900.030 | Y | 800.000 | POWBR | .000 | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | |
|--------|---------|--------|-------------------|--------|
| ○ | 300.150 | ALPHA | 4.530 | POTIAL |
| □ | 600.630 | DALPHA | .000 | BETA |
| ◇ | 900.030 | Y | -20.000 | DBETA |
| △ | | | 800.000 | PO-#8R |
| | | | | .000 |



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ425)

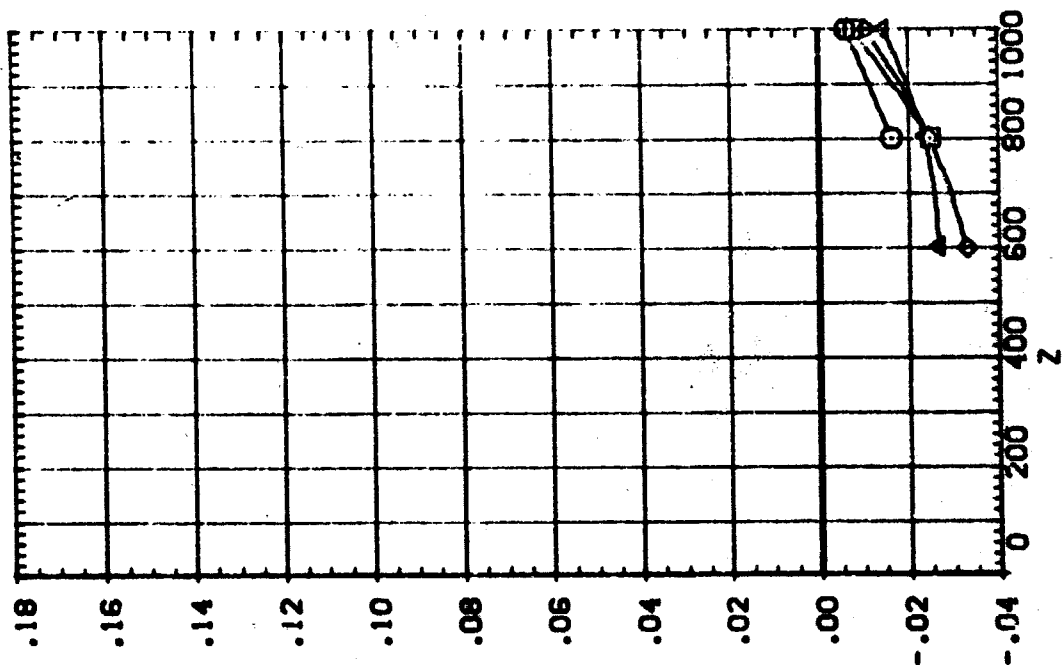
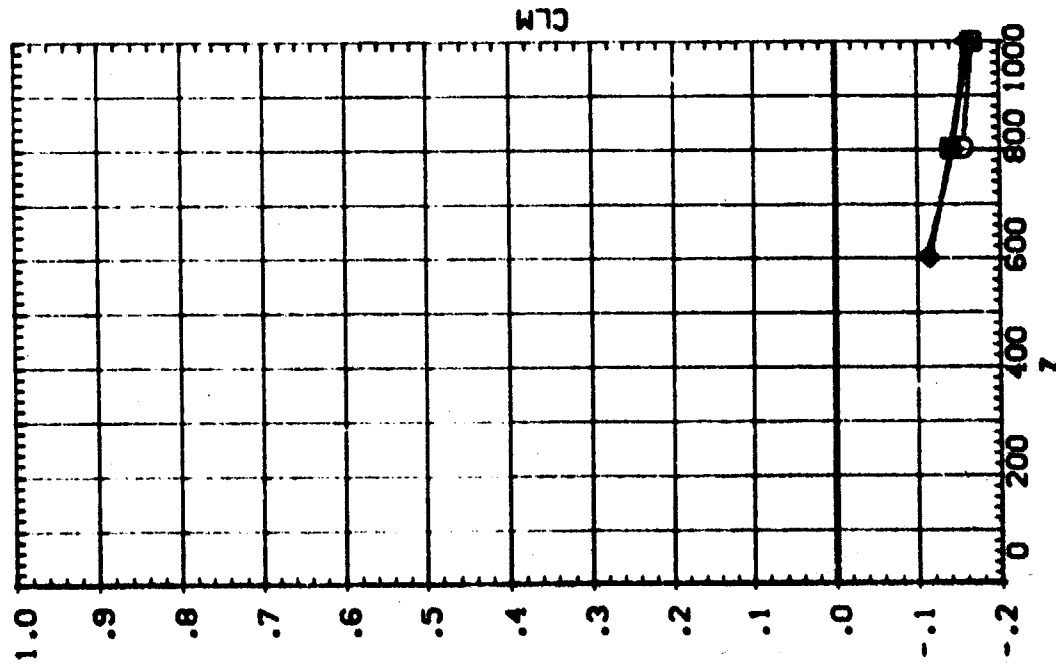
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

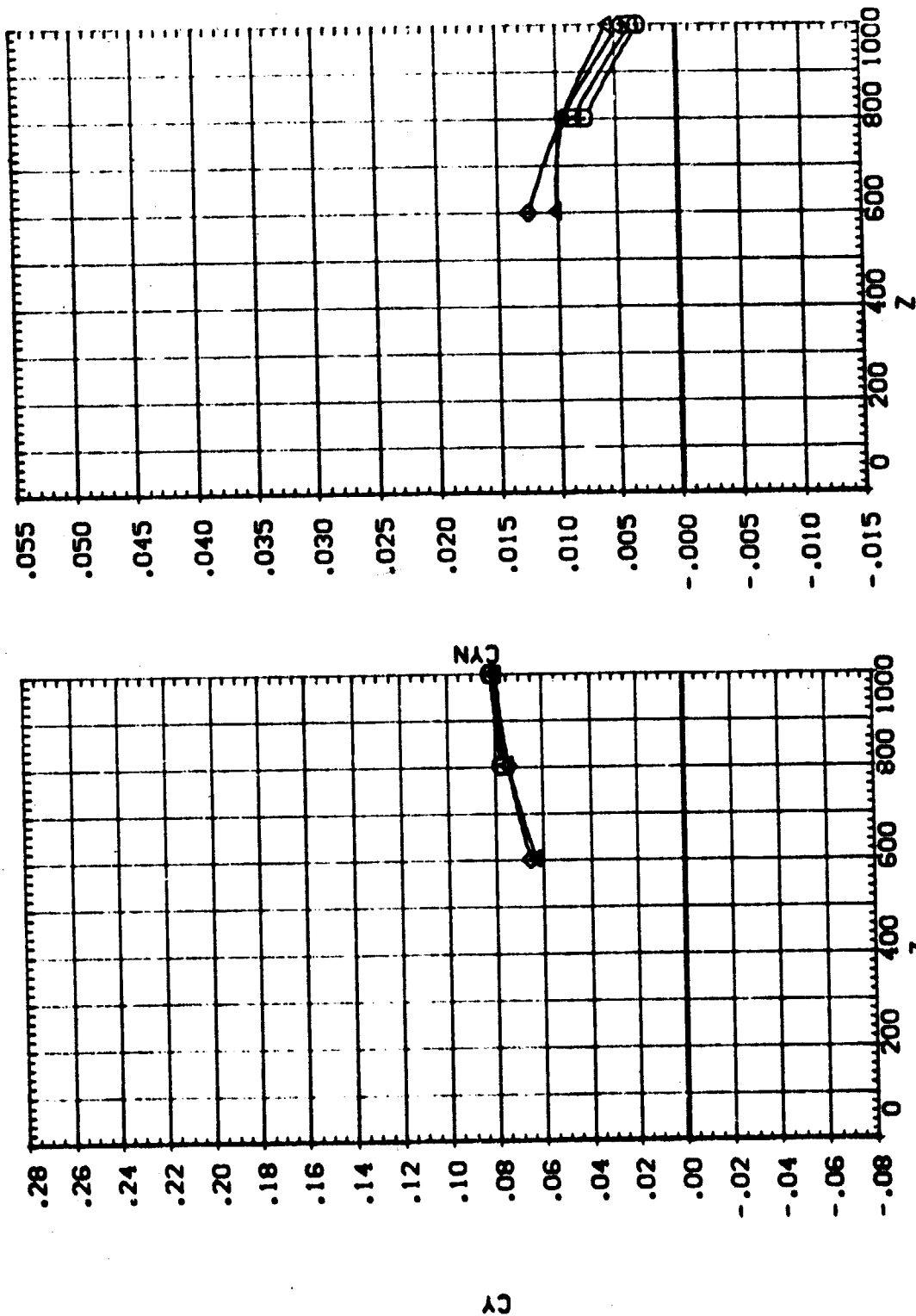
| | MACH | POTIAL | 110.000 |
|---------|--------|--------|---------|
| 300.660 | ALPHA | BETA | .000 |
| 599.870 | DALPHA | DBETA | -10.000 |
| 900.580 | Y | POWER | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | Y | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | .843 | MOH | 4.530 PTOTAL |
| □ | 200.660 | ALPHA | .000 BETA |
| ◇ | 599.870 | DALPHA | -20.000 DBETA |
| △ | 500.560 | Y | .000 PO-PBR |

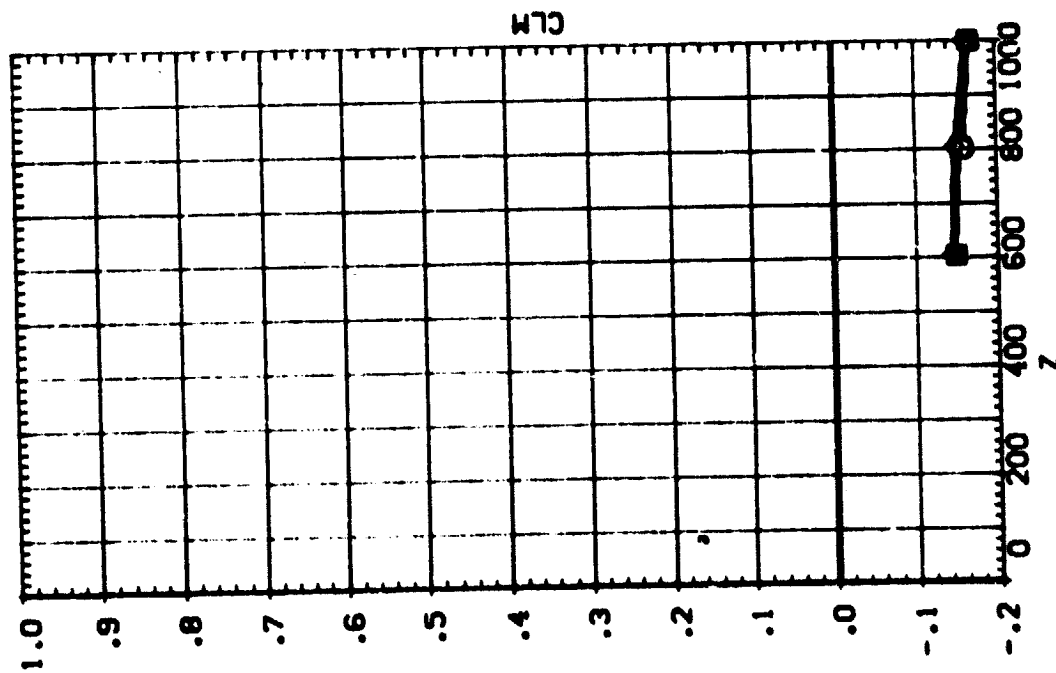
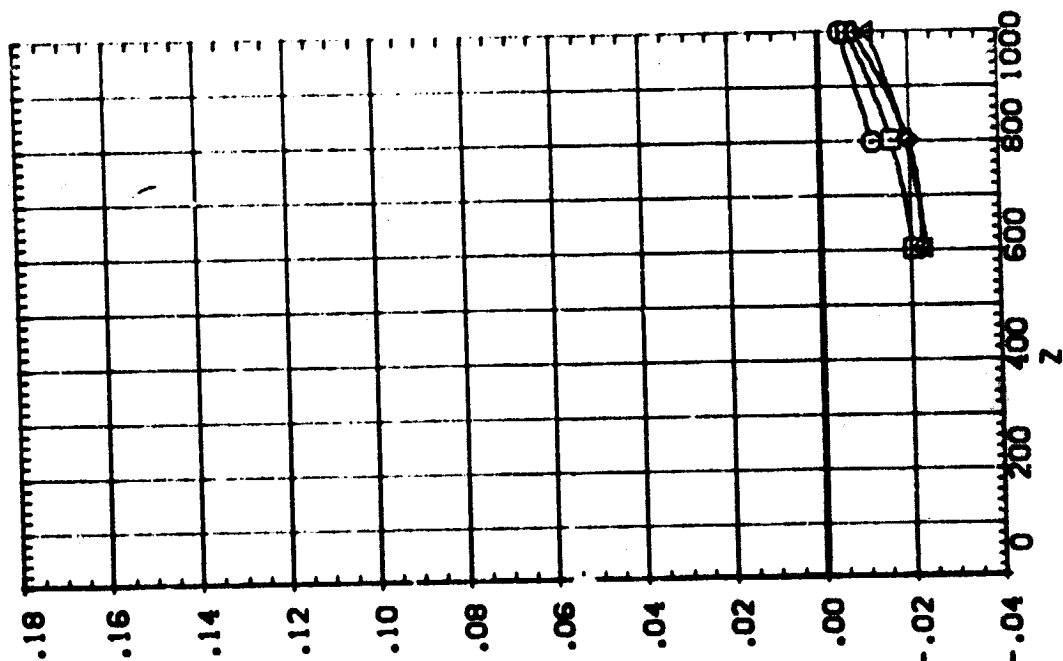


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ426)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

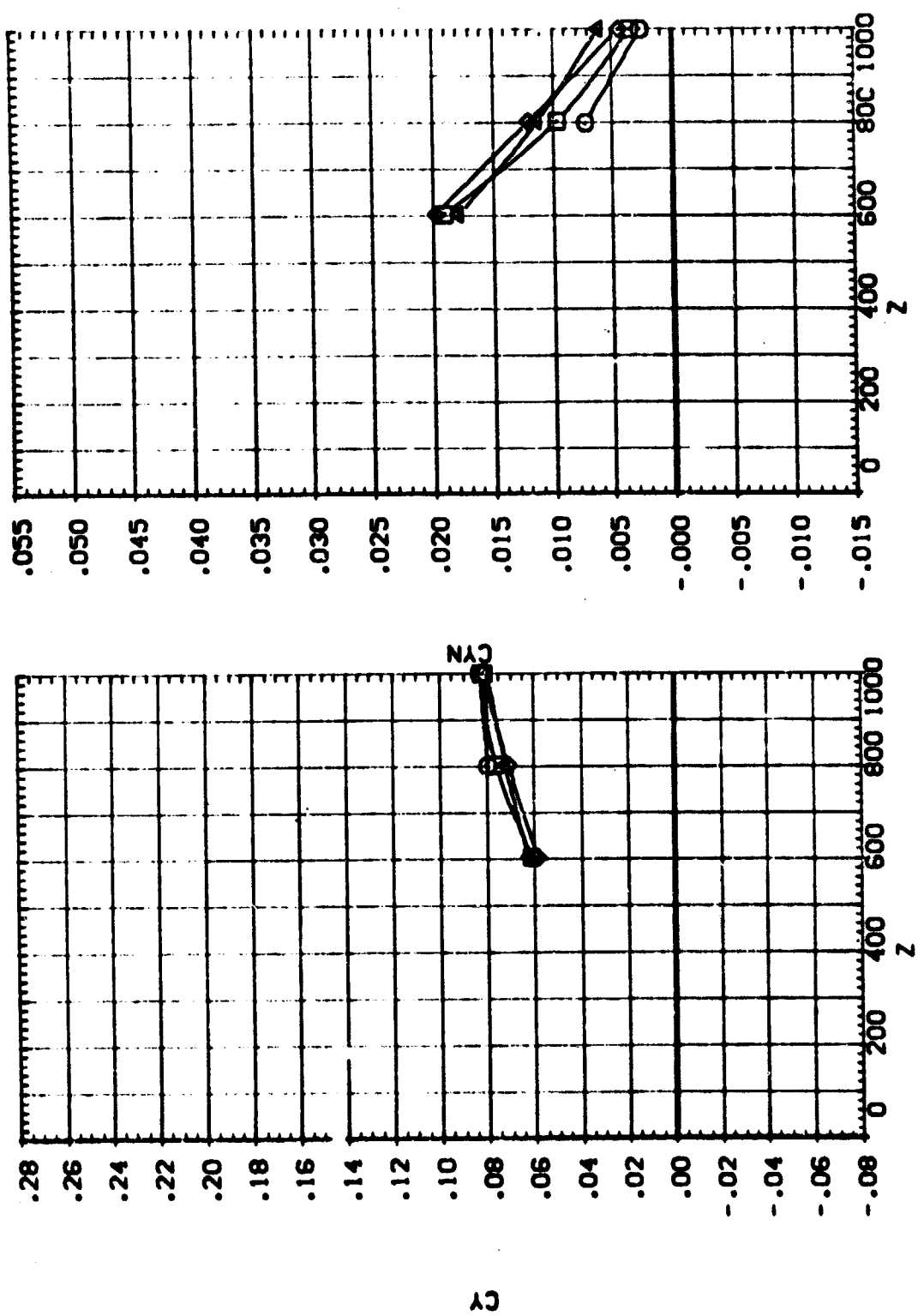
| SYMBOL | K | MACH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| □ | 300.460 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.430 | ALPHA | -20.000 | DBETA | -10.000 | |
| △ | 900.520 | Y | 200.000 | POWER | .000 | |



IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ426)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| | | | | | |
|--------|---|-------------------|---------|--------|---------|
| SYMBOL | X | PARAMETRIC VALUES | | | |
| | | MACH | 4.530 | PTOTAL | 110.000 |
| | | ALPHA | .000 | BETA | .000 |
| | | DALPHA | -20.000 | DBETA | -10.000 |
| | | Y | 200.000 | POWER | .000 |

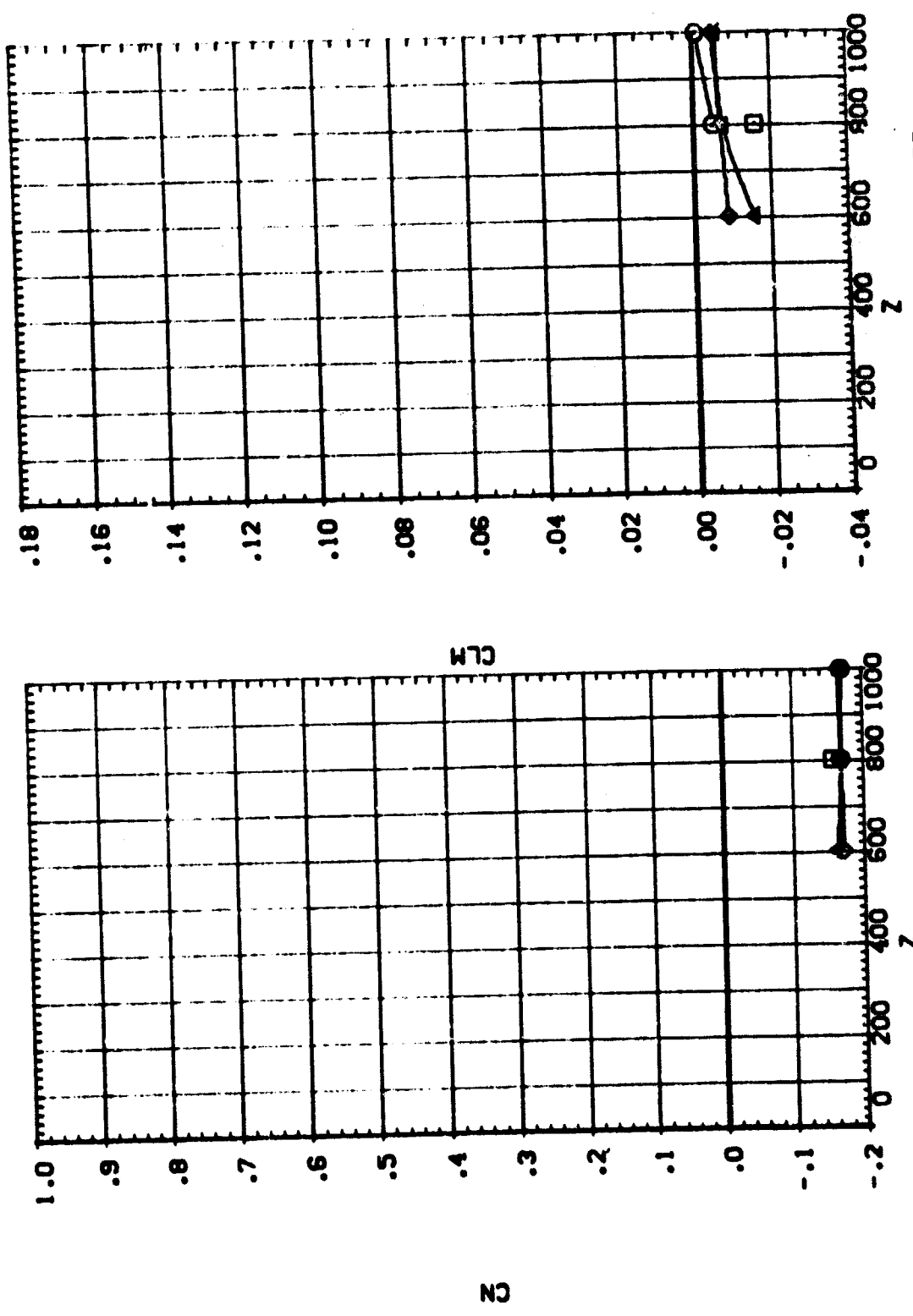


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ427)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|--------|
| | | MACH | PITOTAL | BETA | PC-PSR |
| ○ | .585 | 4.530 | 110.000 | | |
| □ | 300.540 | .000 | .000 | | |
| ◇ | 600.750 | -20.000 | -10.000 | | |
| △ | 900.720 | 400.000 | | | |

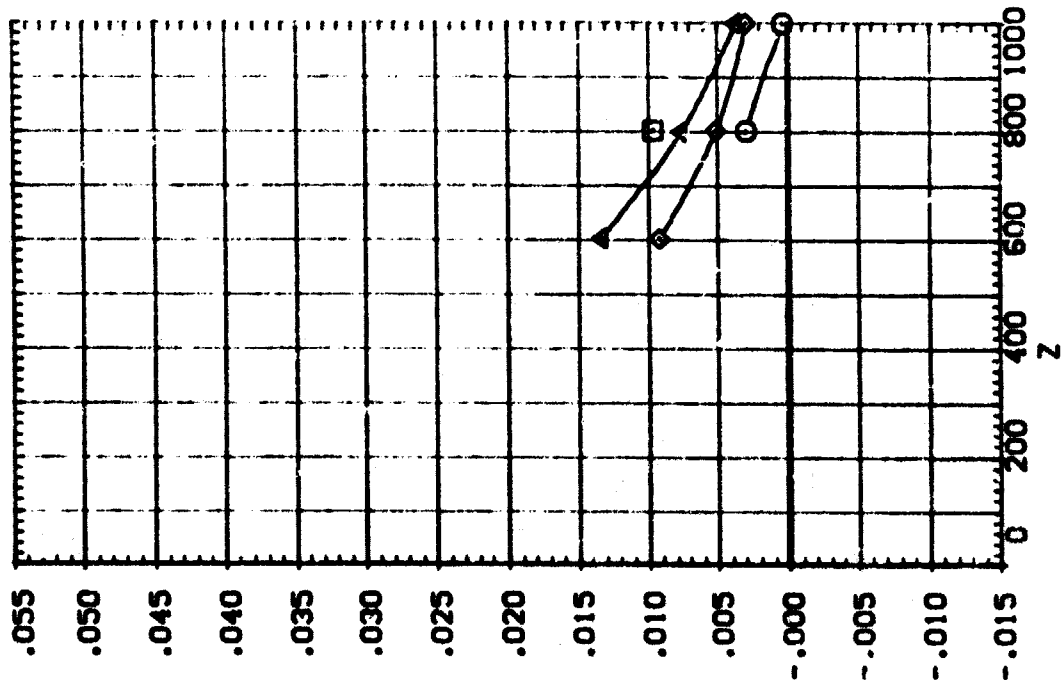
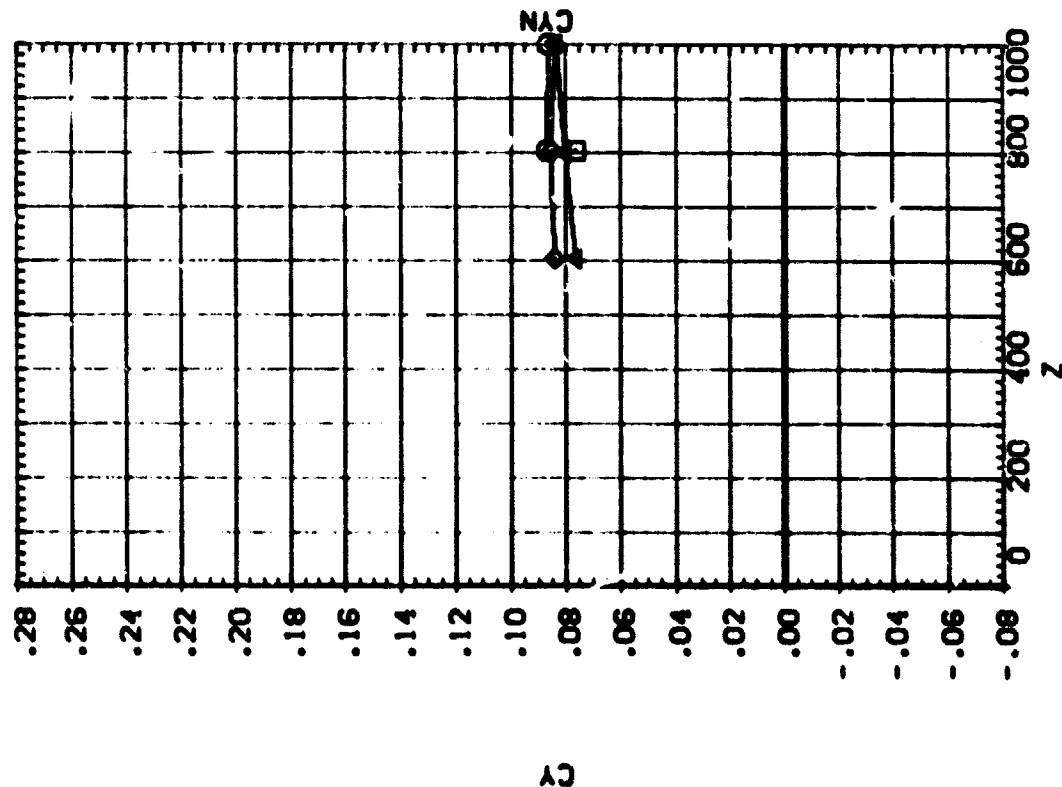


JA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ427)

SYMBOL
 ○ □ ◇ △

PARAMETRIC VALUES
 .SRB 4.530 PTOTAL 110.000
 300.640 ALPHA .000 BETA .000
 600.750 DALPHA -20.000 DBETA -10.000
 900.720 V 400.000 PDHBR .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

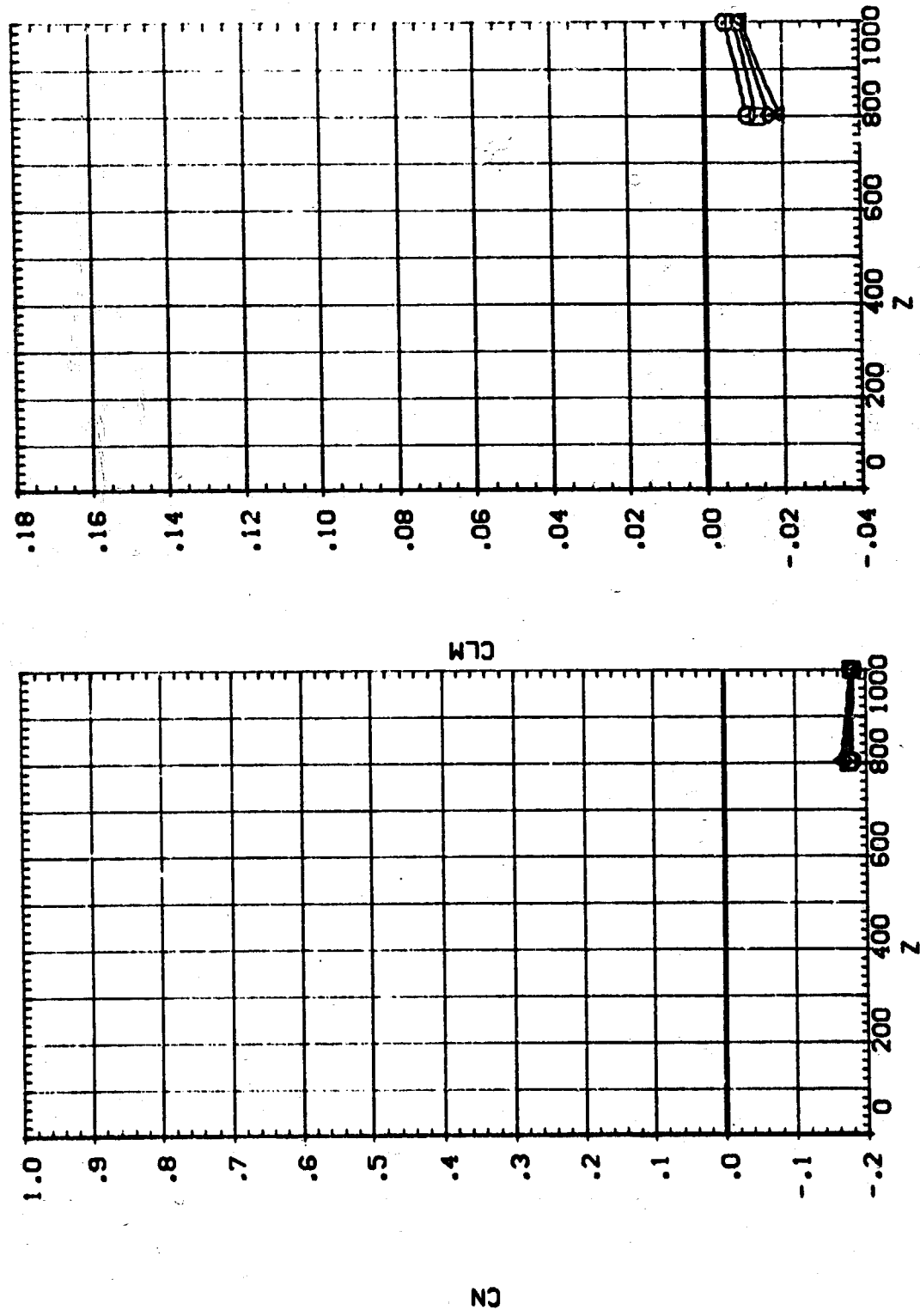


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ428)

SEE THE ASSOCIATED DATA
SHEET FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | 300.300 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.930 | ALPHA | -20.000 | BETA | -20.000 |
| △ | 900.570 | Y | .000 | PC-HR | .000 |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ428)

SYMBOL

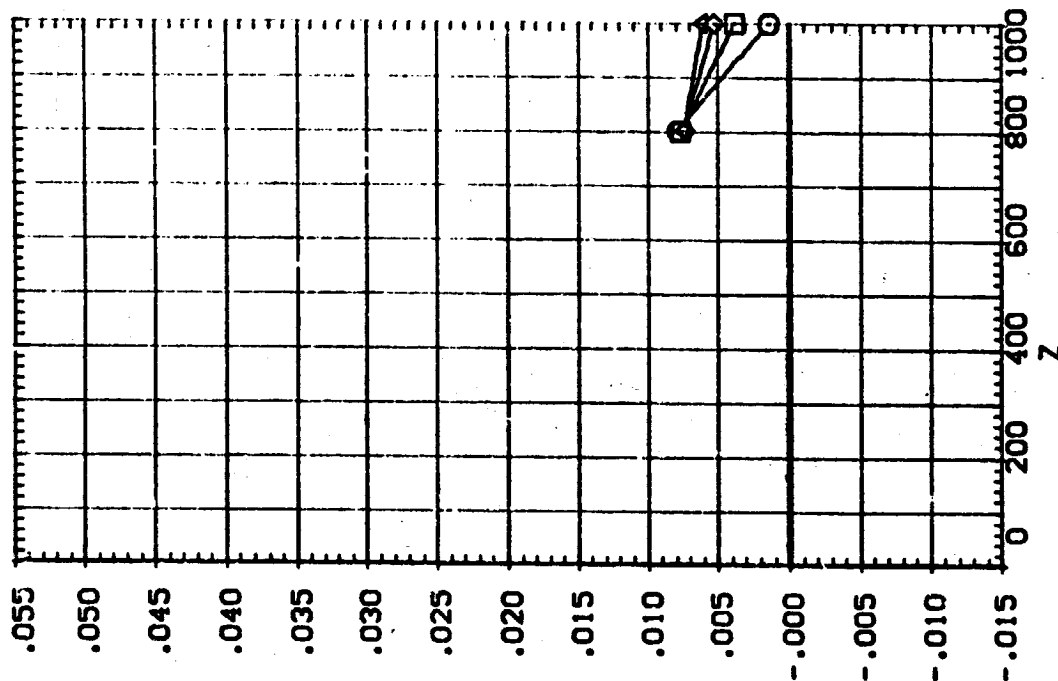
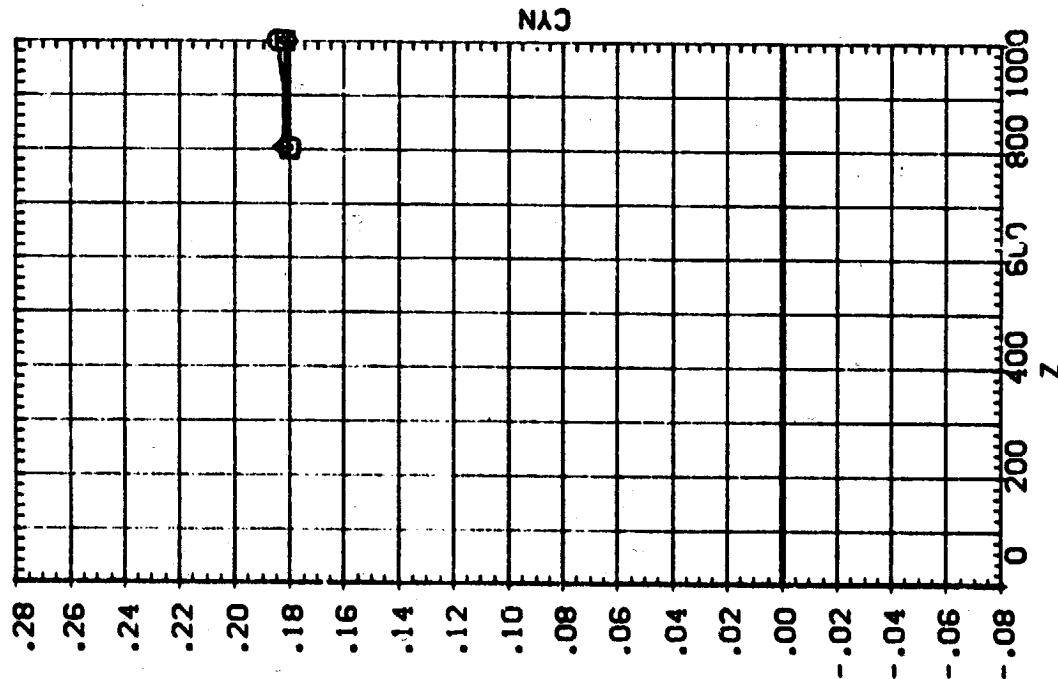
X
300.300
600.930
900.570

MACH
ALPHA
DALPHA
Y

PARAMETRIC VALUES
4.530
.000
-20.000
.000

PTOTAL
BETA
DBETA
PC-HBR

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

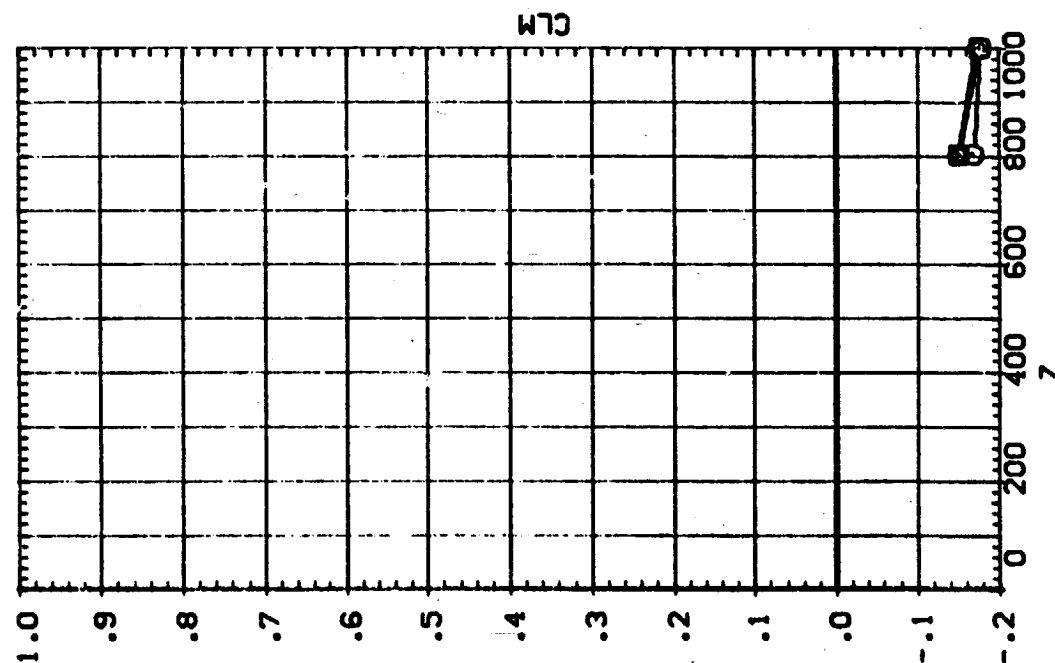
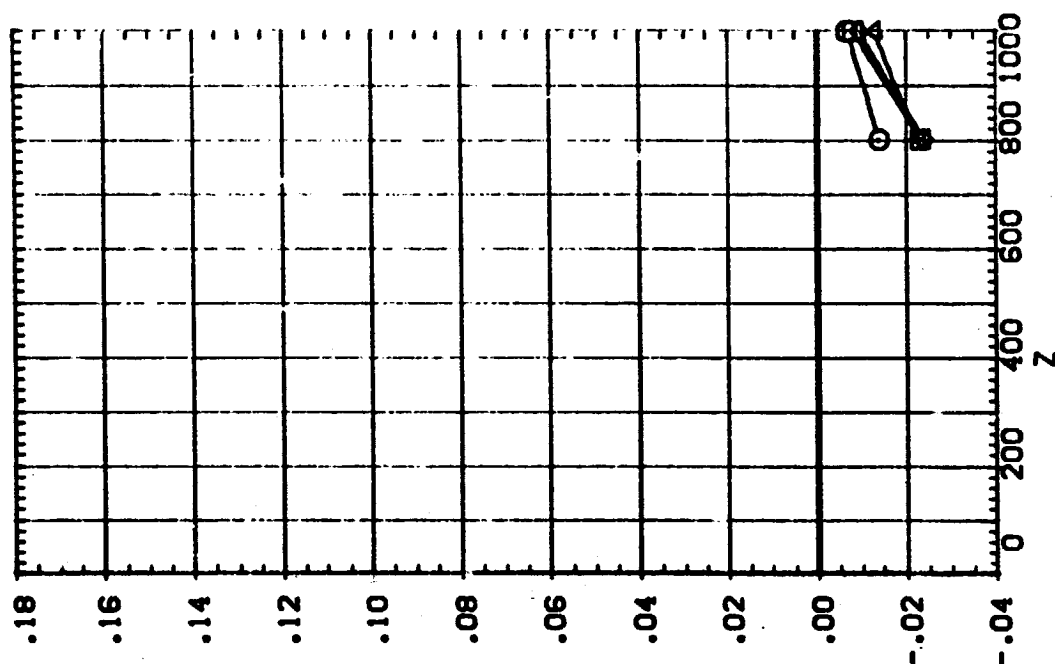


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ429)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| ○ | 300.660 | ALPHA | .000 | BETA | .000 | |
| □ | 600.330 | DALPHA | -20.000 | DBETA | -20.000 | |
| ◇ | 900.330 | Y | 200.000 | PC+R | .000 | |



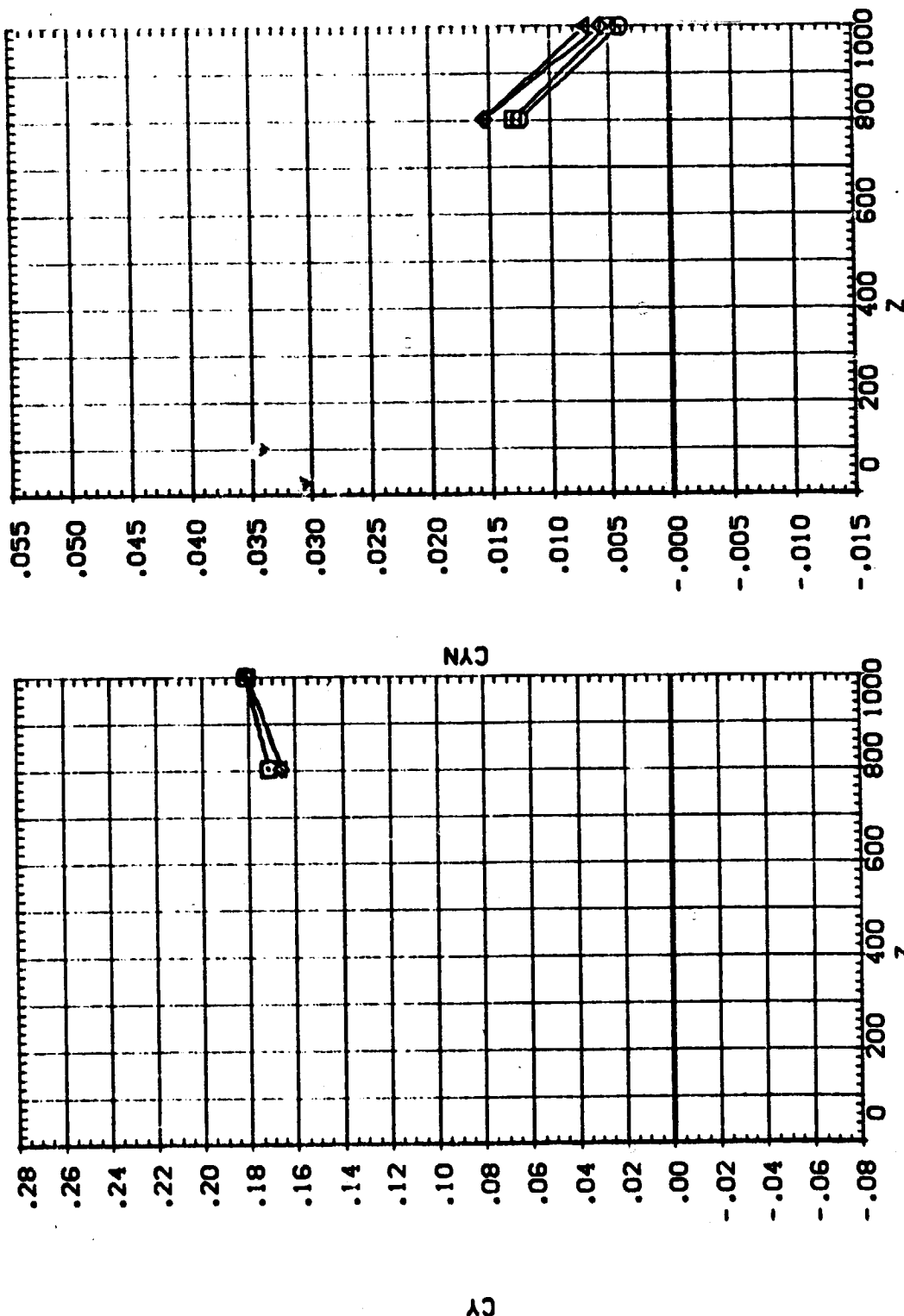
SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

!A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ429)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| X | PARAMETRIC VALUES | | | |
|---------|-------------------|--------|---------|---------|
| | 0.291 | MACH | 4.530 | P.TOTAL |
| 300.660 | | ALPHA | .000 | BETA |
| 600.330 | | DALPHA | -20.000 | DBETA |
| 900.330 | | V | 200.000 | PC468 |

SYMBOL
 ○ □ ◇ △

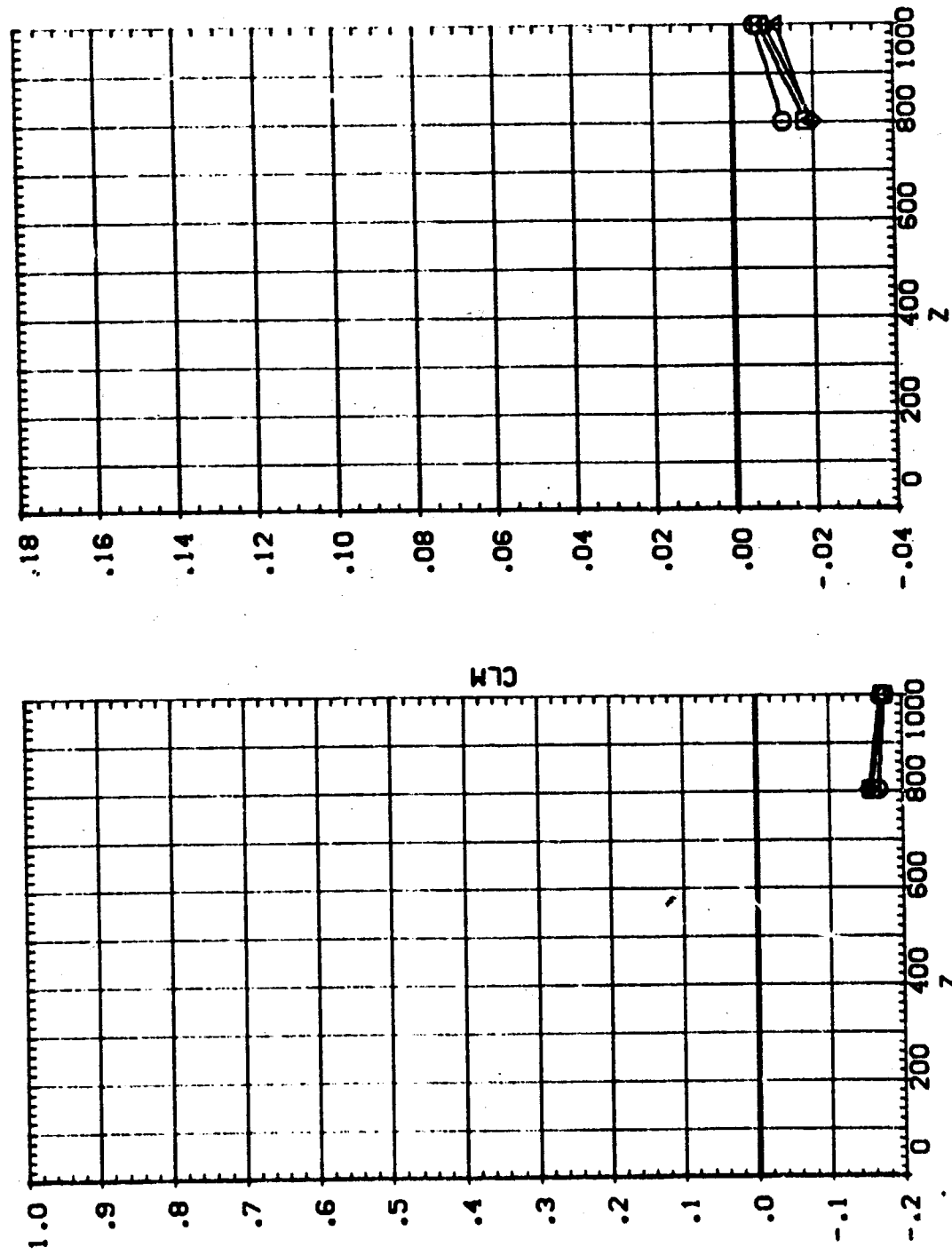


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

1A13 SRB(SB) W/O PLUMES SEPARATING FROM 09T10 (RTJ430)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|--|
| | | MACH | 4.530 | POTIAL | 110.000 | |
| ○ | 300.250 | ALPHA | .000 | BETA | .000 | |
| □ | 600.500 | DALPHA | -20.000 | DBETA | -20.000 | |
| ◇ | 900.250 | Y | 400.000 | PC-HSR | .000 | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ430)

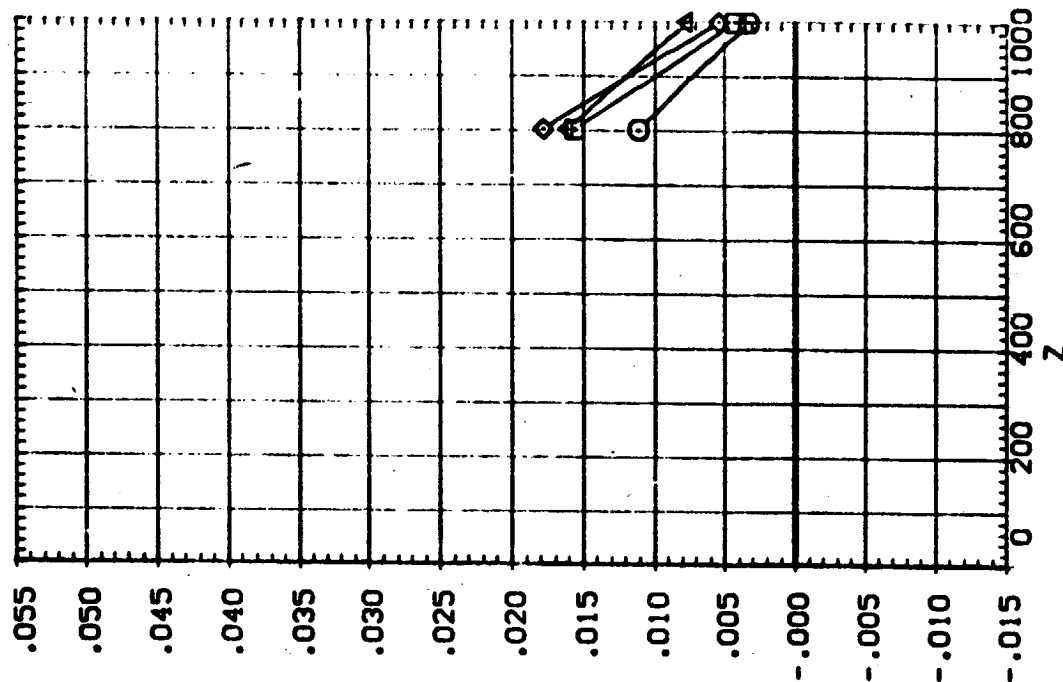
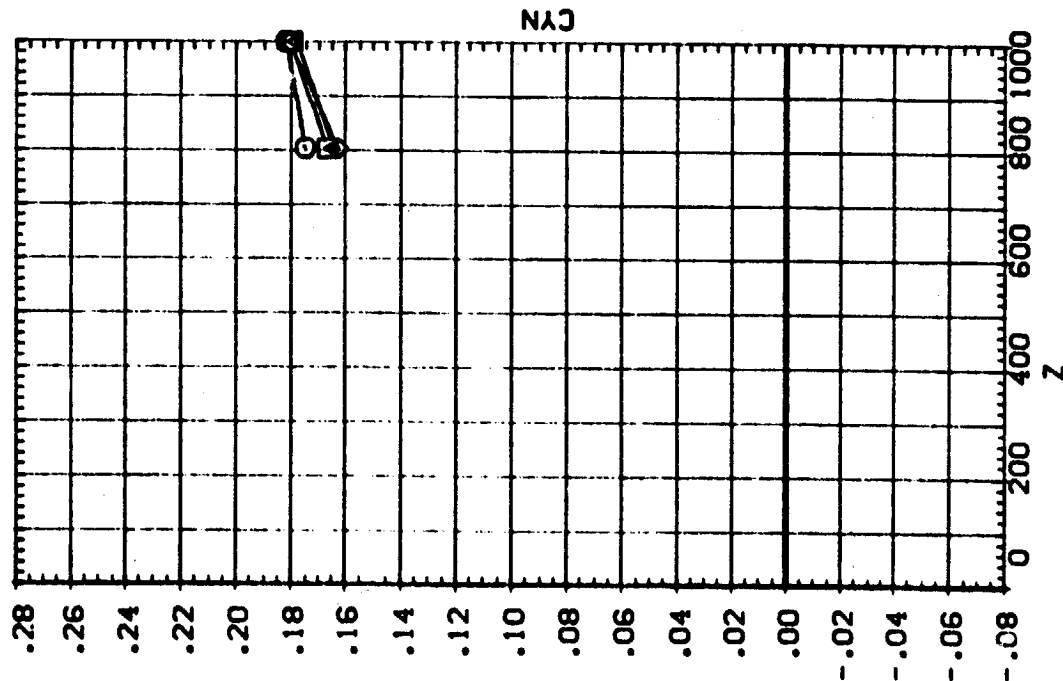
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| X | MACH | PTOTAL | 110.000 |
|---------|--------|---------|---------|
| 300.250 | .586 | 4.530 | .000 |
| 600.580 | ALPHA | .000 | BETA |
| 900.290 | DALPHA | -20.000 | DBETA |
| | Y | 400.000 | POWER |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

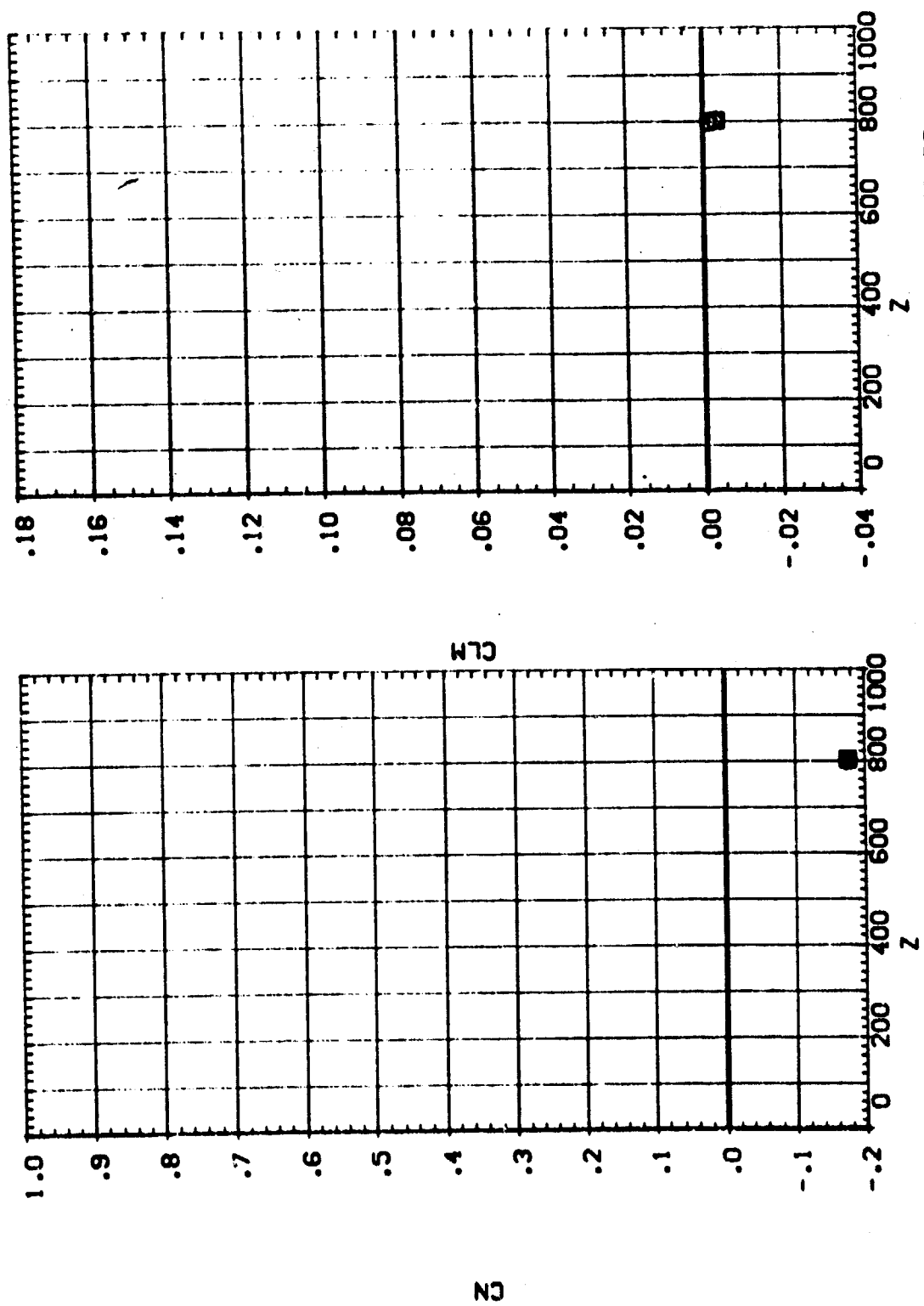


SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ431)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|---------|---------|
| | | MACH | 4.530 | PTOTAL | BETA | |
| ○ | -1.218 | ALPHA | .000 | BETA | .000 | 110.000 |
| □ | 300.610 | DALPHA | -20.000 | DBETA | -20.000 | |
| ◇ | 600.610 | Y | 800.000 | PC-MER | .000 | |
| △ | 900.550 | | | | | |



IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ431)

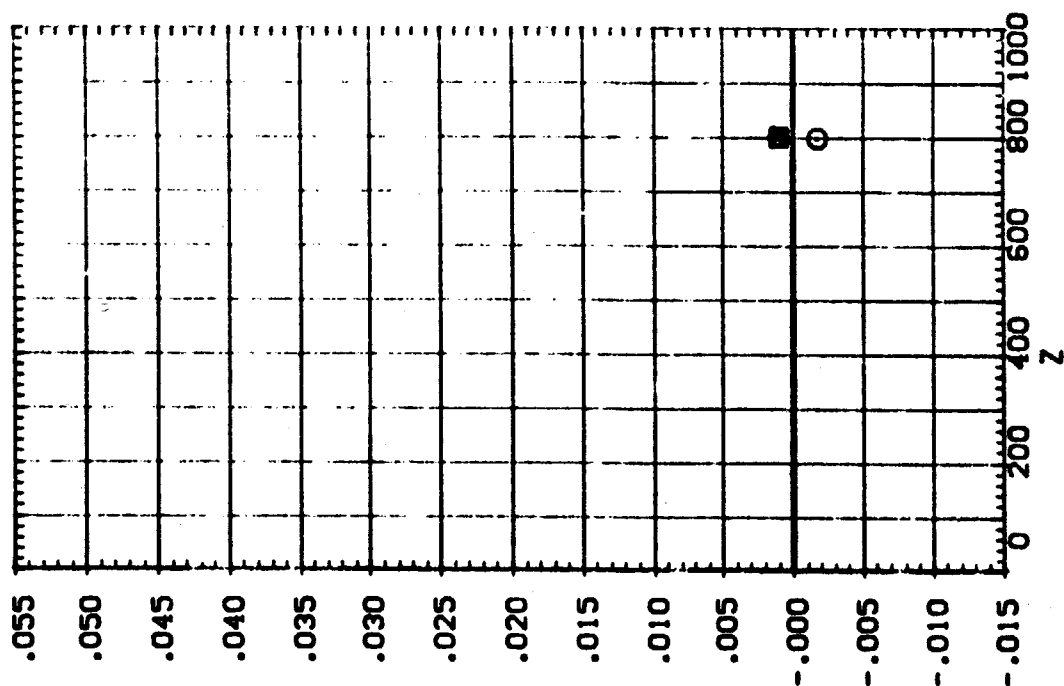
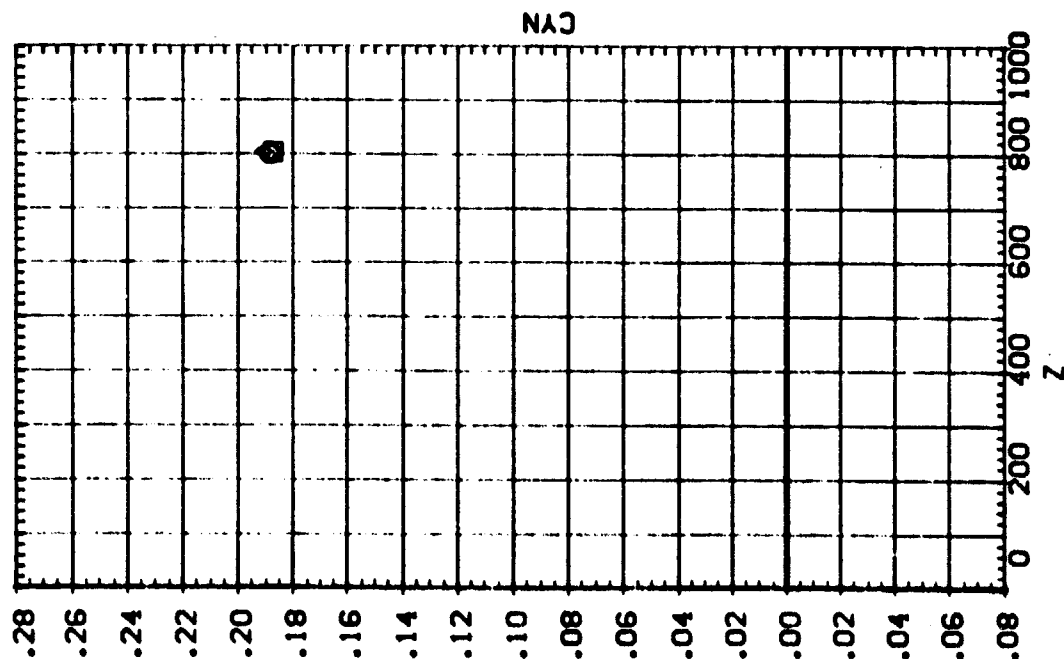
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

X -1.218 MACH 4.530 PTOTAL 110.000
300.610 ALPHA .000 BETA .000
600.610 DIALPHA -20.000 DBETA -20.000
900.560 Y 800.000 PC468 .000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ457)

SYMBOL

○

Y

10.254

MACH

4.510

PARAMETRIC VALUES

PTOTL

28.900

BETA

5.000

DBETA

.000

PCWB

.000

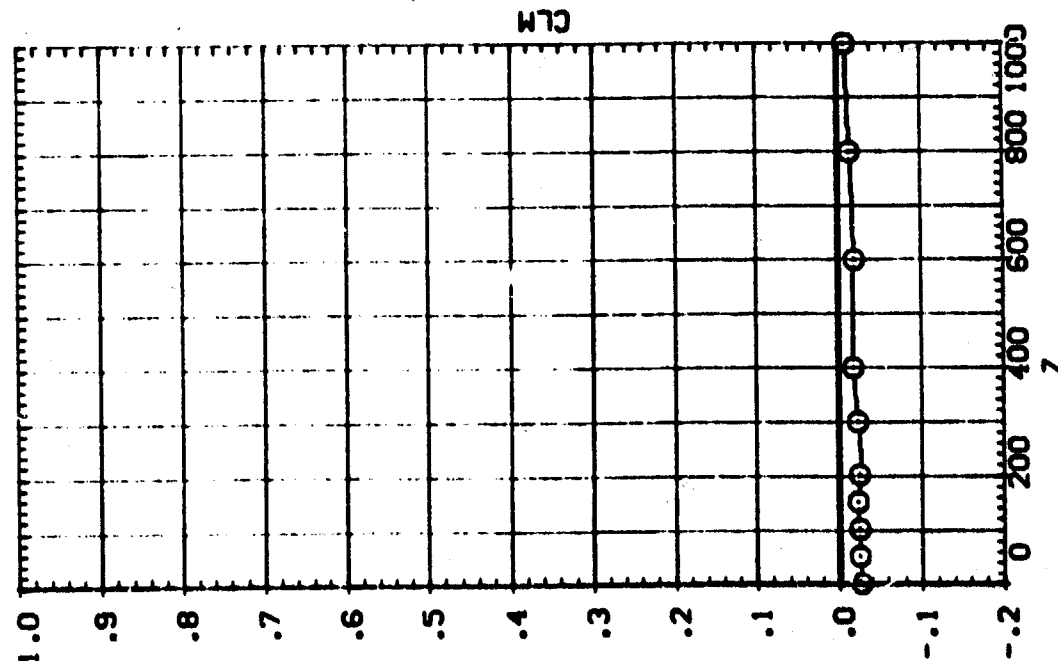
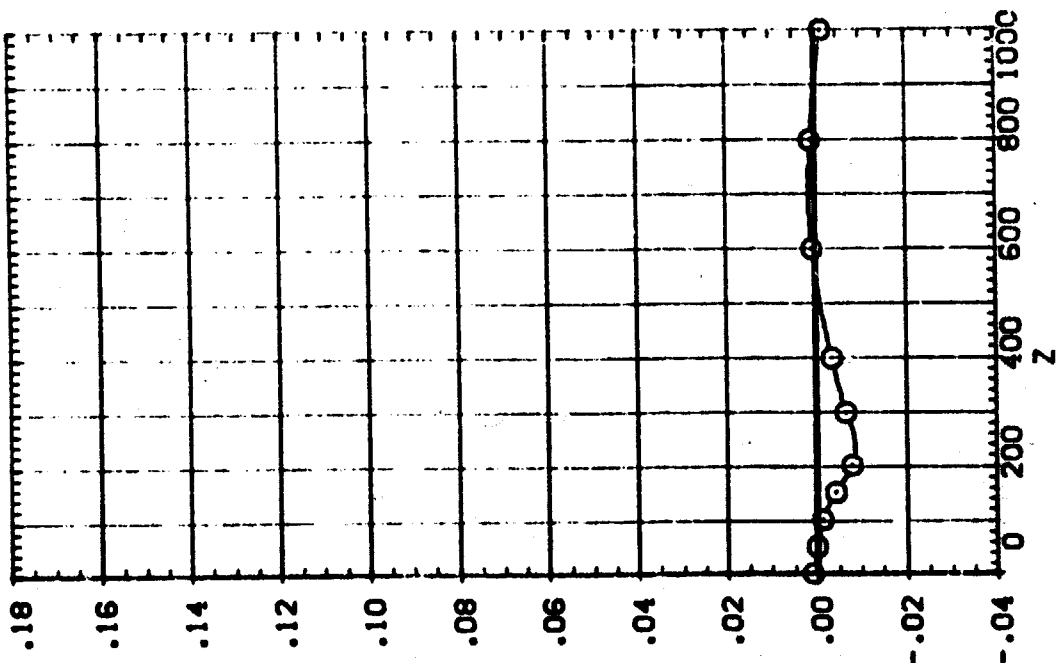
ALPHA

.000

X

.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13 SRB(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ457)

SYMBOL

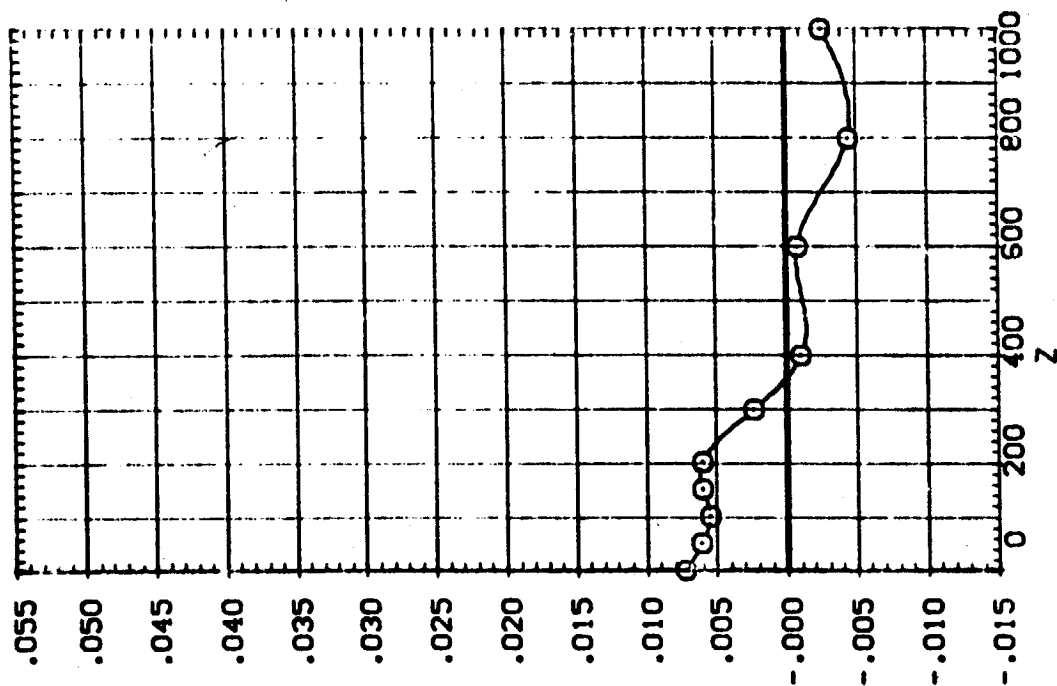
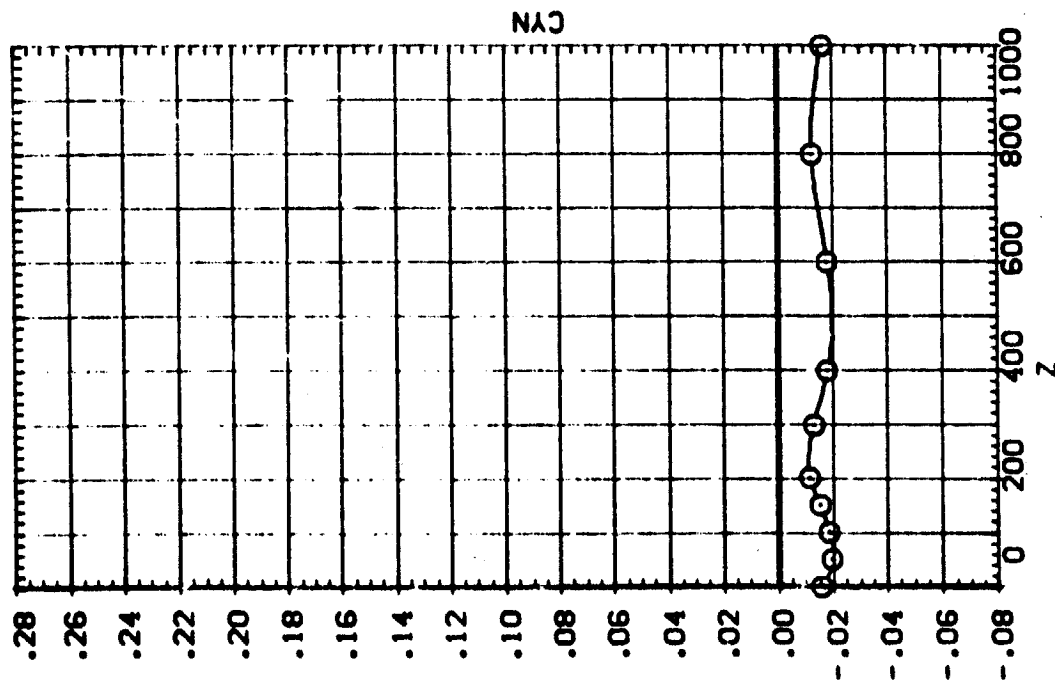
○

Y 10.254

PARAMETRIC VALUES

WCH 4.510 PTOTL 28.900
 ALPHA .000 BETA 5.000
 DALPHA .000 DBETA .000
 X PCHB .000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) W/O PLUMES SEPARATING FROM 09110 (RIJ458)

SYMBOL

○

Y

.475

MACH

ALPHA

DELTA

X

PARAMETRIC VALUES

4.510

POTIL

BETA

DBETA

PC-HB

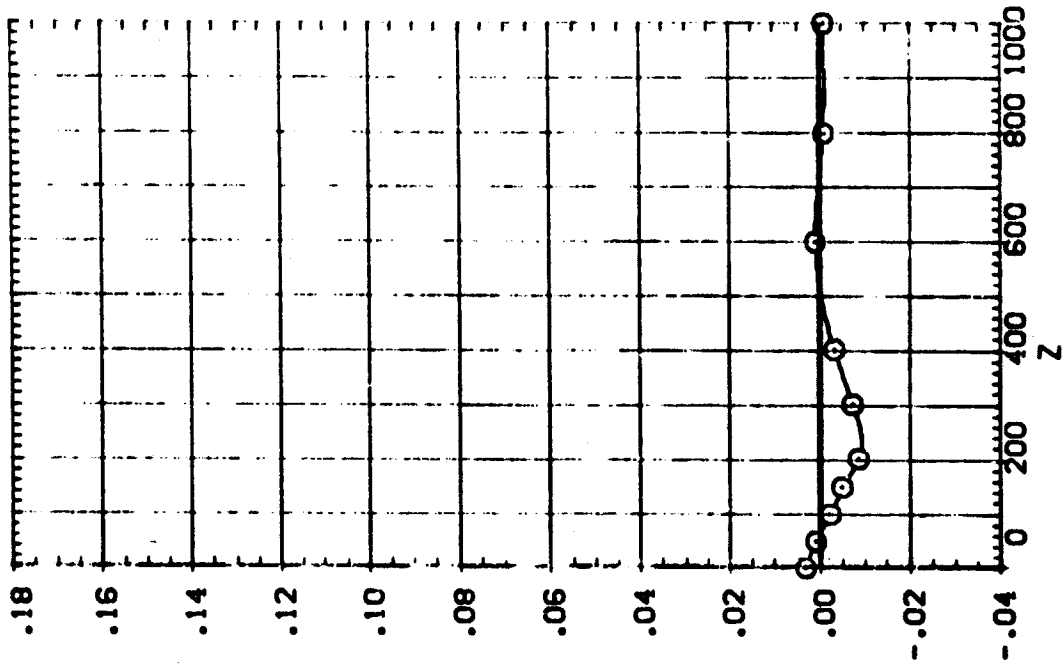
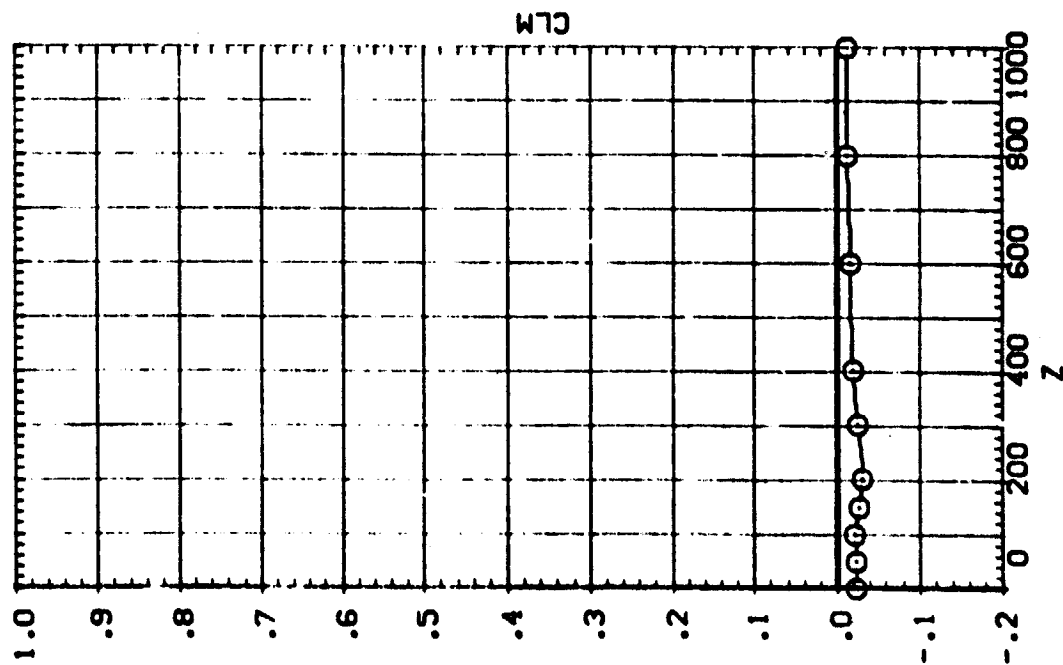
28.900

5.000

5.000

.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09110

IA13 SR8(S8) W/O PLUMES SEPARATING FROM 09T10 (RTJ458)

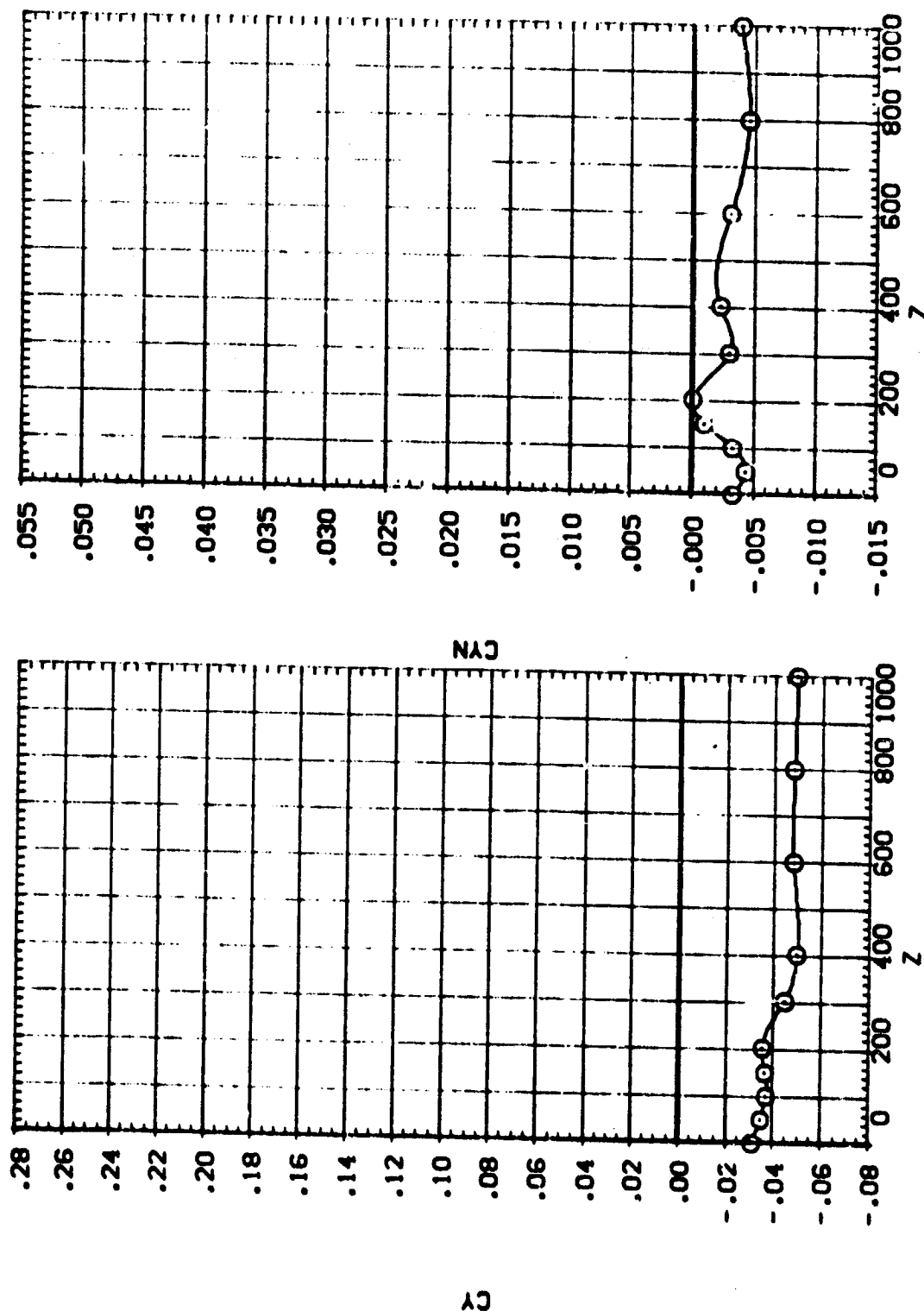
SYMBOL Y

O

PARAMETRIC VALUES

| | | | |
|-------|-------|-------|--------|
| ALPHA | 4.510 | PTOTL | 28.500 |
| BETA | .000 | BETA | 5.000 |
| DBETA | .000 | DBETA | 5.000 |
| PC+PB | .000 | PC+PB | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

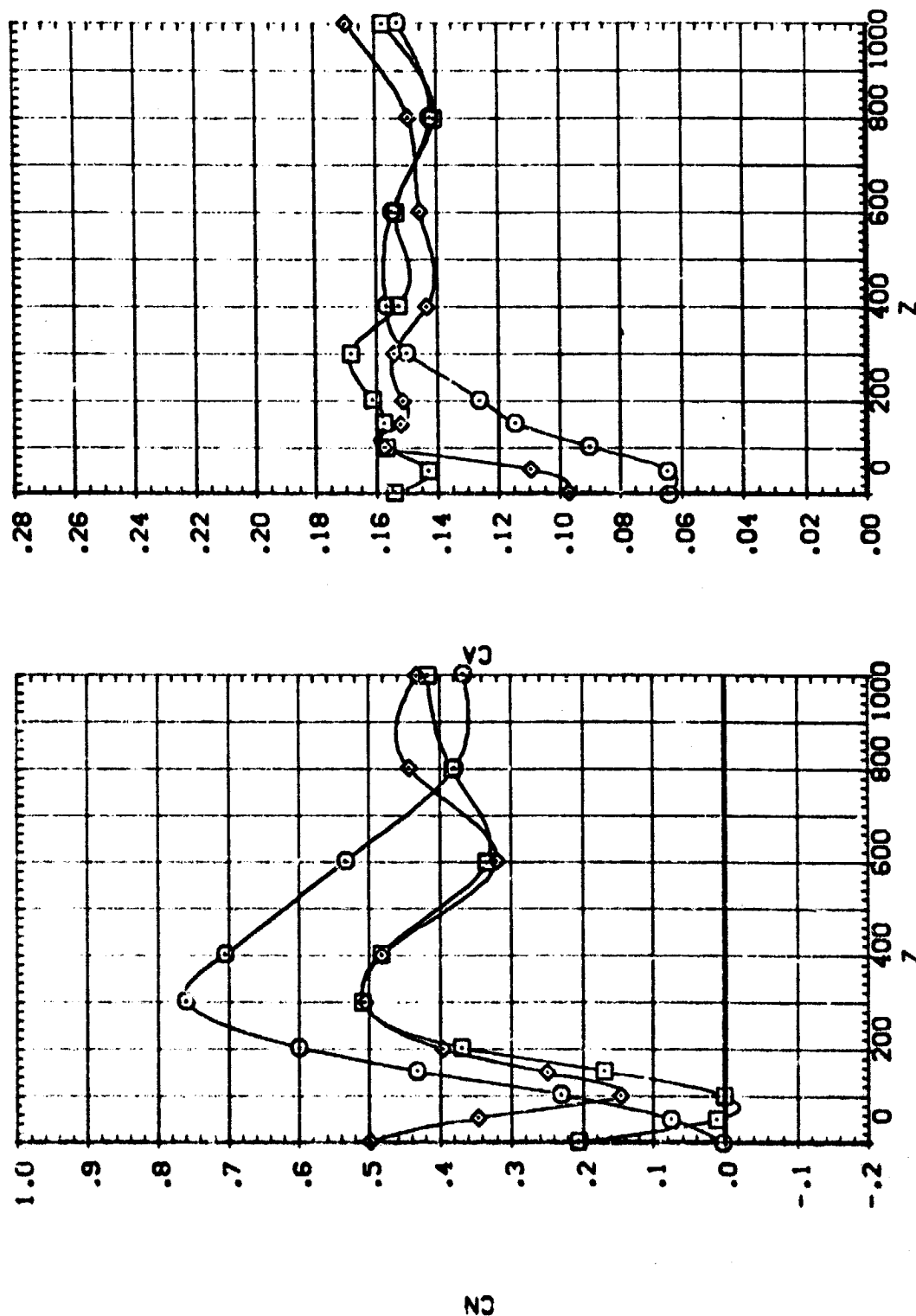


SR8 W/O PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

[A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ100)]

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|---------|----------|
| | | MACH | 4.480 | P TOTAL | 11.600 |
| ○ | 300.230 | ALPHA | .000 | BETA | .000 |
| □ | 600.430 | DALPHA | .000 | DBETA | .000 |
| ◇ | | Y | .000 | PC-MBR | 1500.000 |



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10

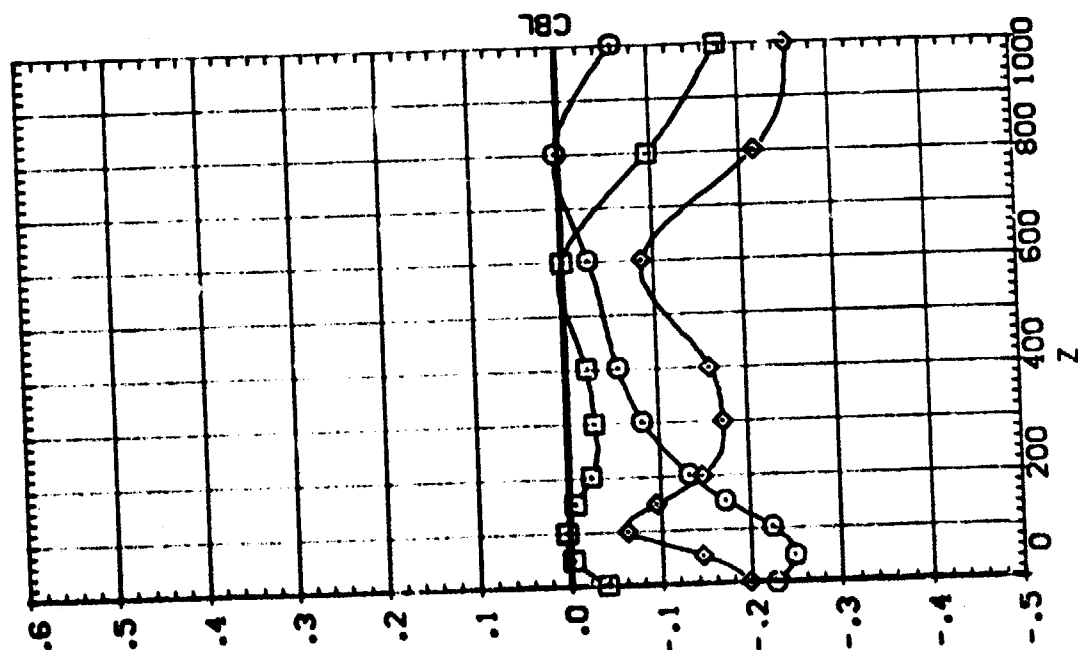
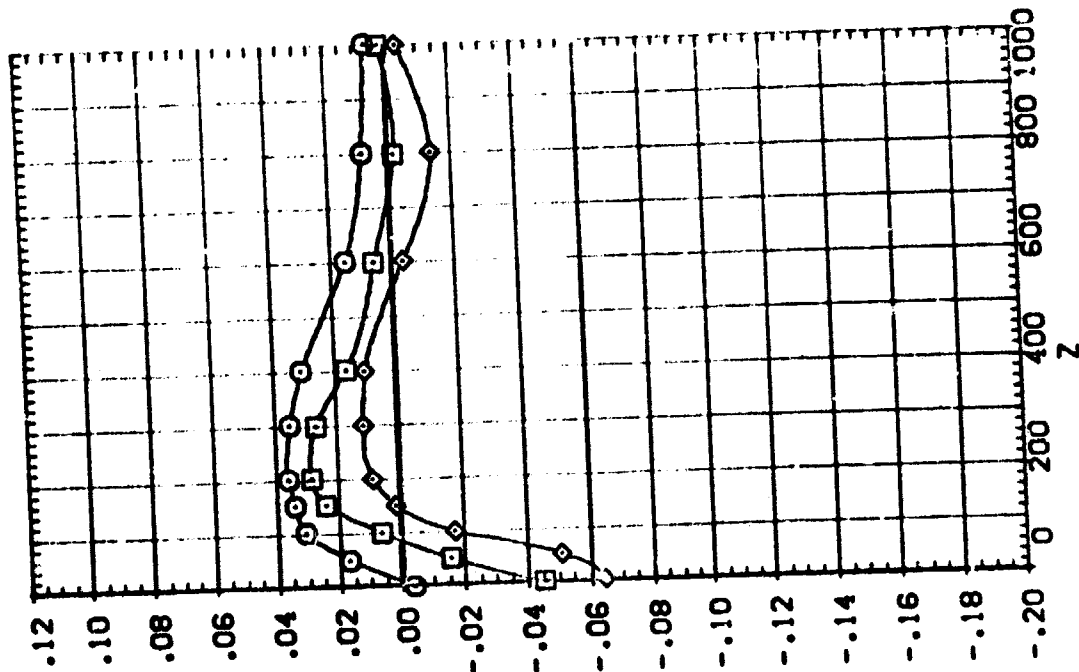
SYMBOL X

PARAMETRIC VALUES

MACH .245
ALPHA .000
DALPHA .000

PTOTAL 11.500
BETA .000
DBETA .000
PC-PR 1500.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

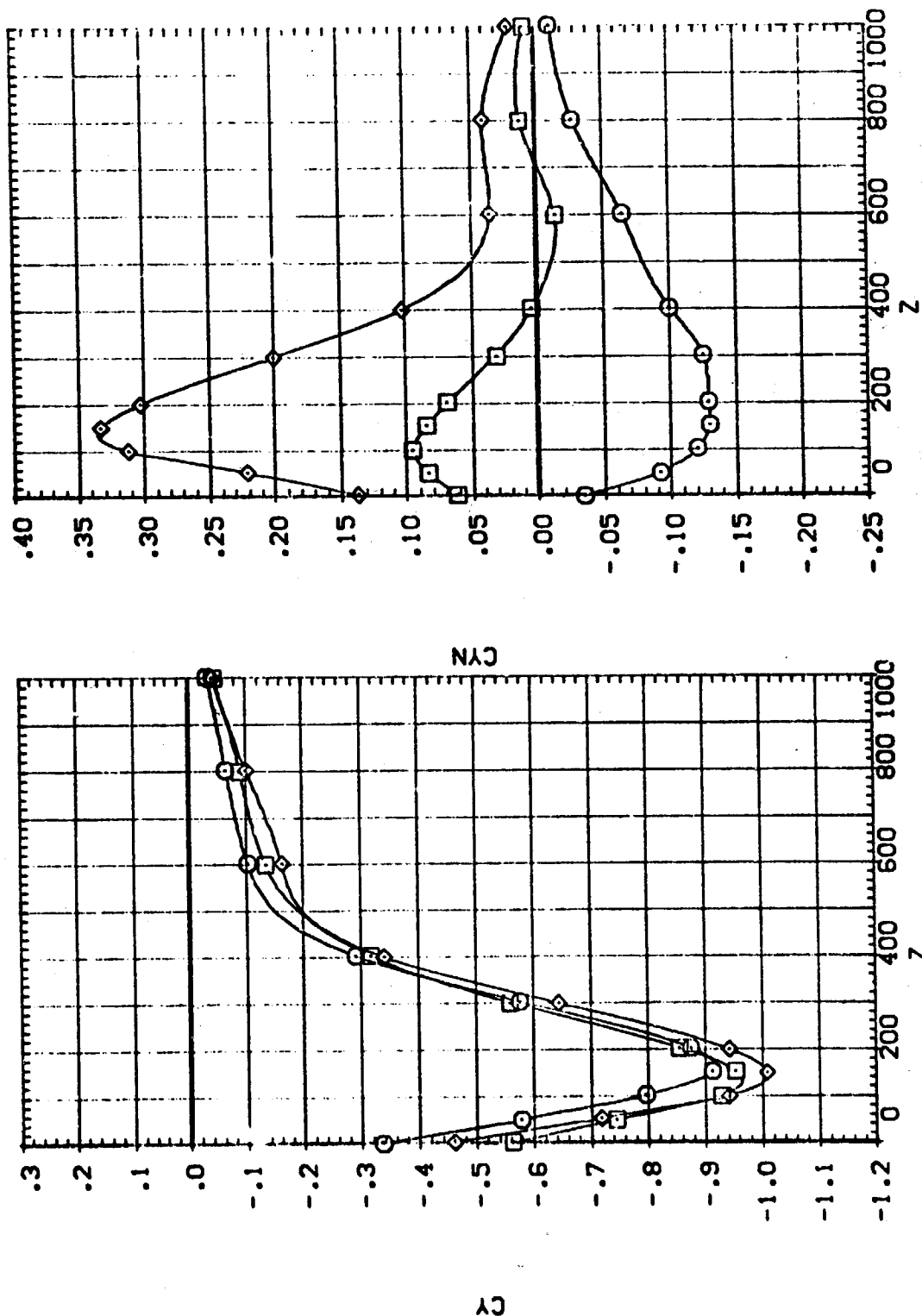


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ100)

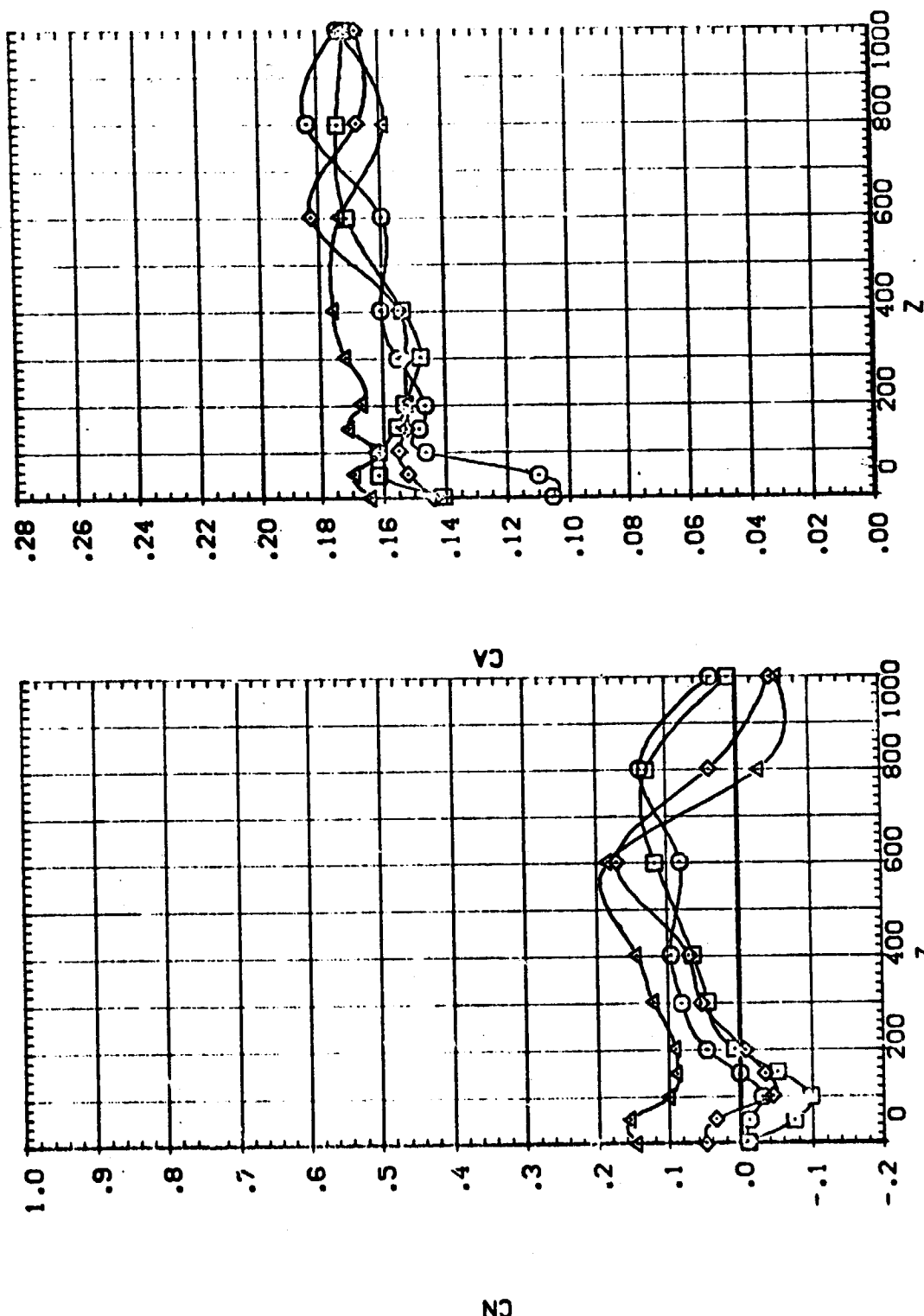
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|----------|
| | | MACH | PTOTAL | BETA | PC-HSR |
| ○ | .245 | 4.480 | 11.600 | .000 | .000 |
| □ | 300.230 | .000 | .000 | .000 | .000 |
| ◇ | 600.430 | .000 | .000 | .000 | 1500.000 |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|---------|--|
| | | | 4.510 | PTOTAL | 29.000 | |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 | |
| □ | 600.490 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.670 | Y | .000 | PO+PR | 750.000 | |

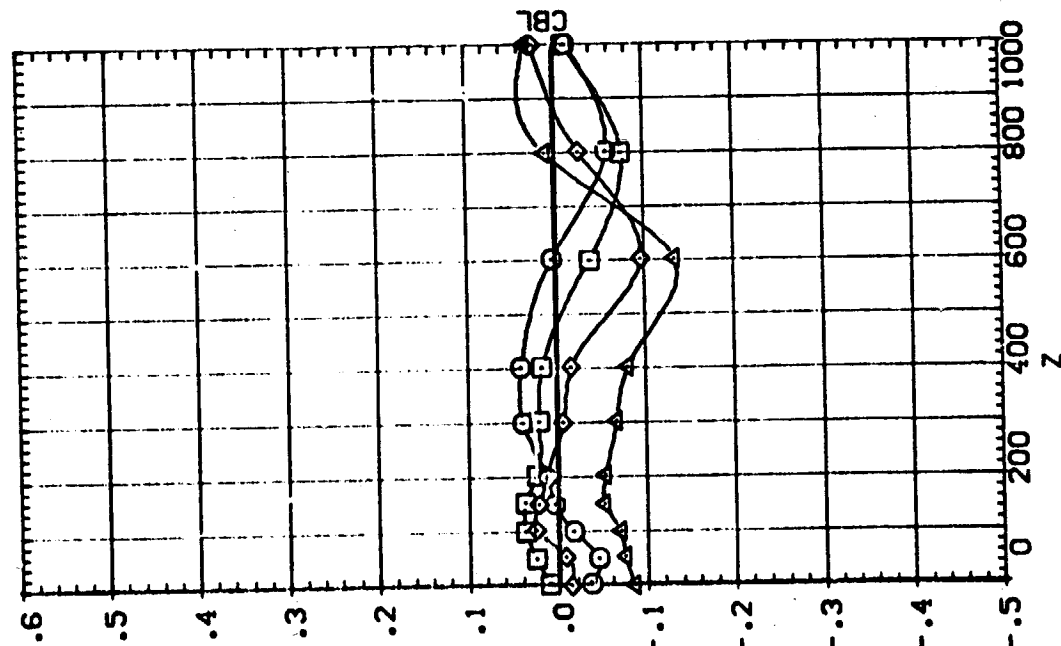
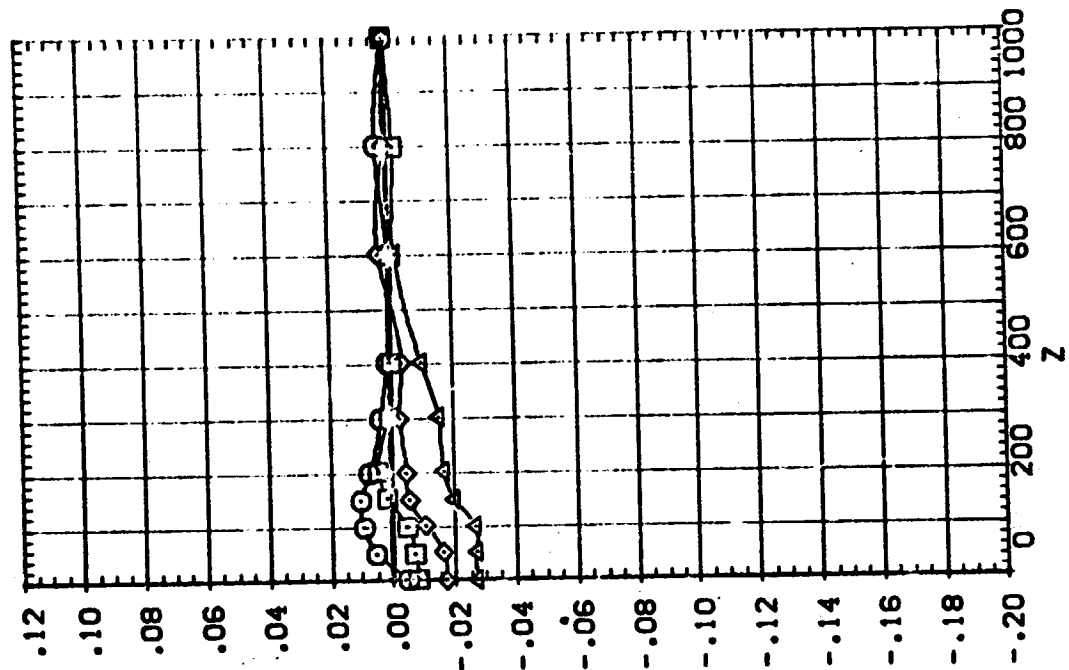


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ102)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|---------|
| | | MACH | 4.510 | PTOTAL | 29.000 |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 |
| □ | 600.490 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.670 | Y | .000 | PCHGR | 750.000 |

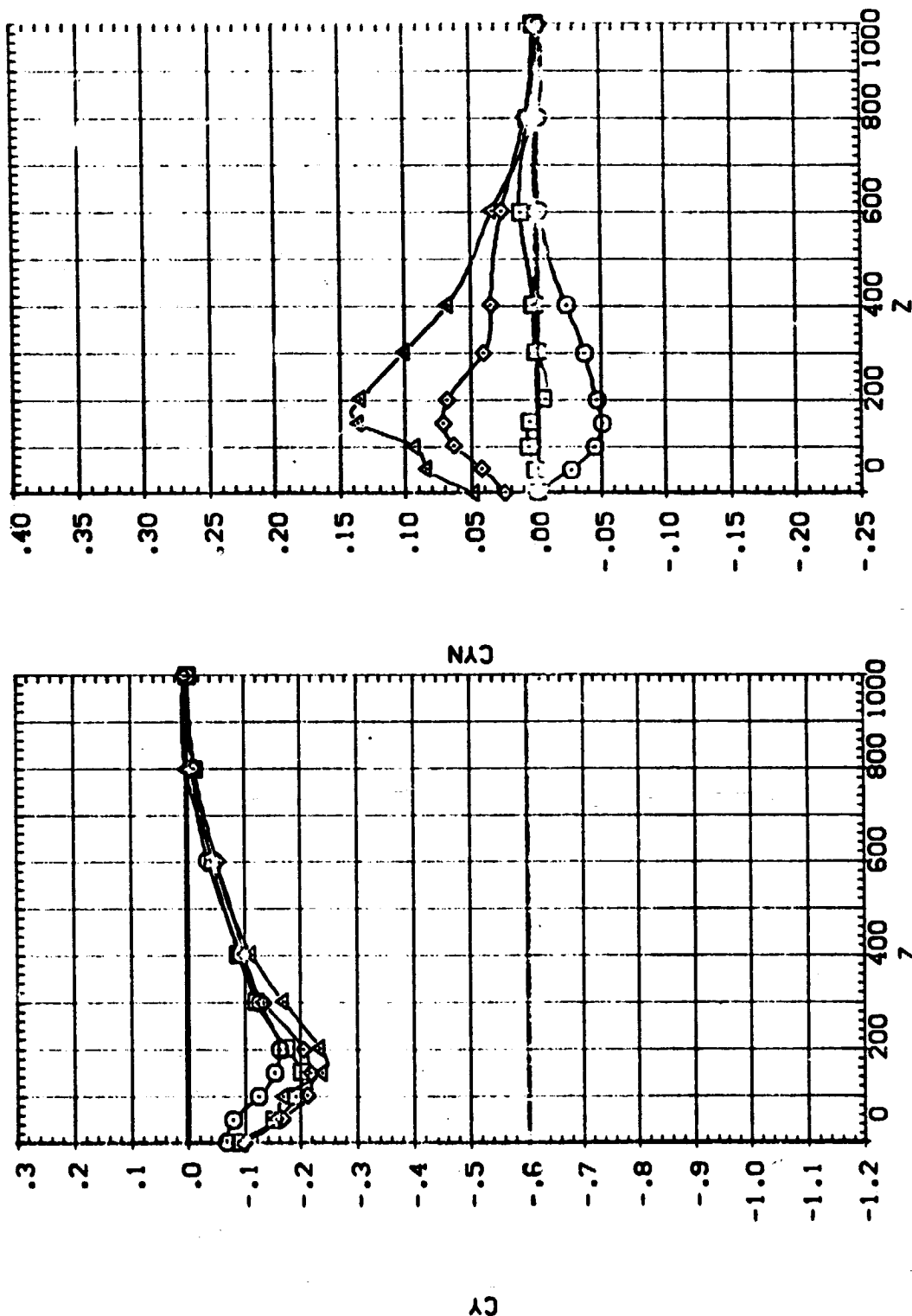


CLM

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ102)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|--------|---------|--|
| | | MACH | 4.510 | PTOTAL | 29.000 | |
| □ | 300.320 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.490 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.670 | Y | .000 | PCMBR | 750.000 | |

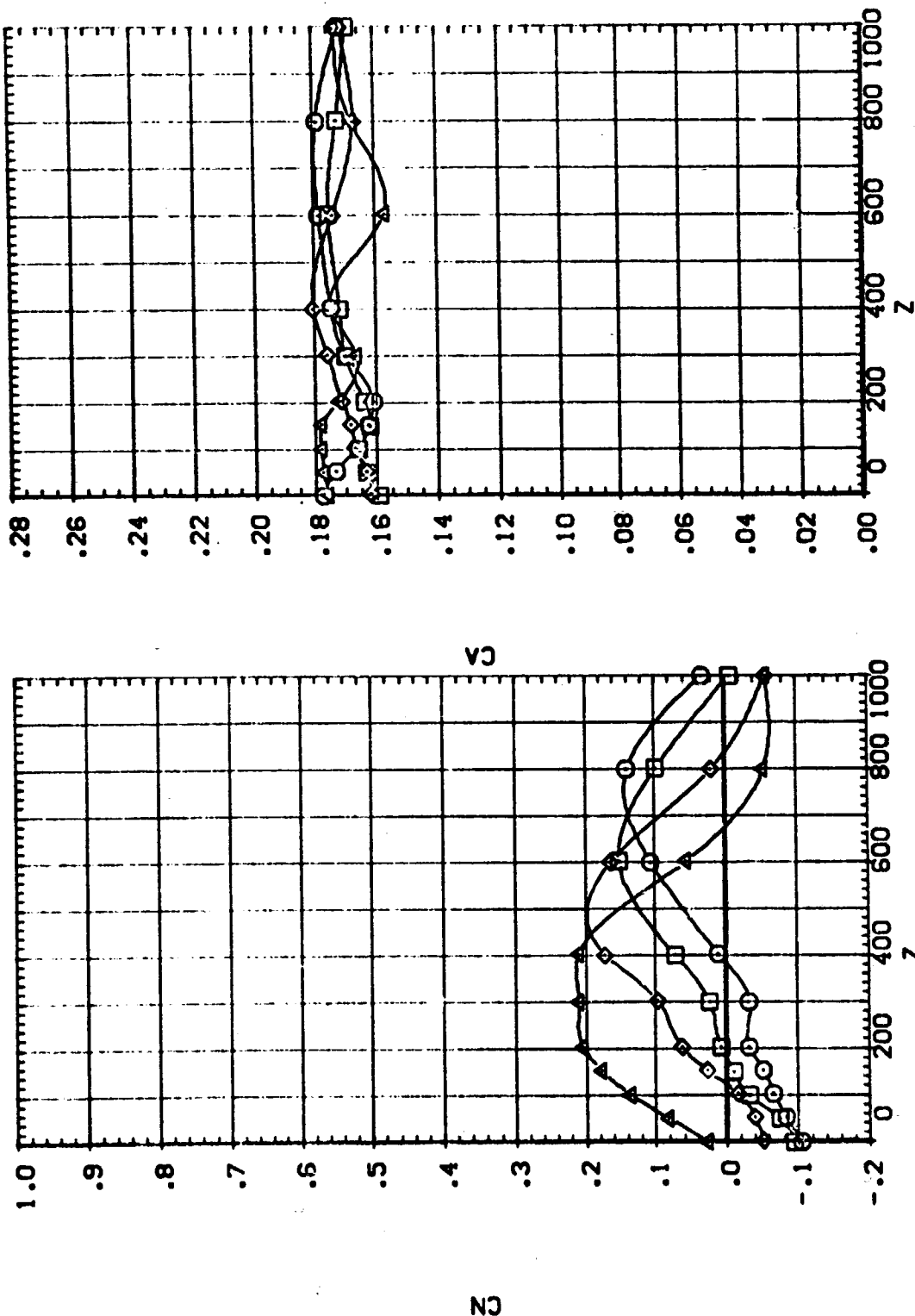


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ103)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

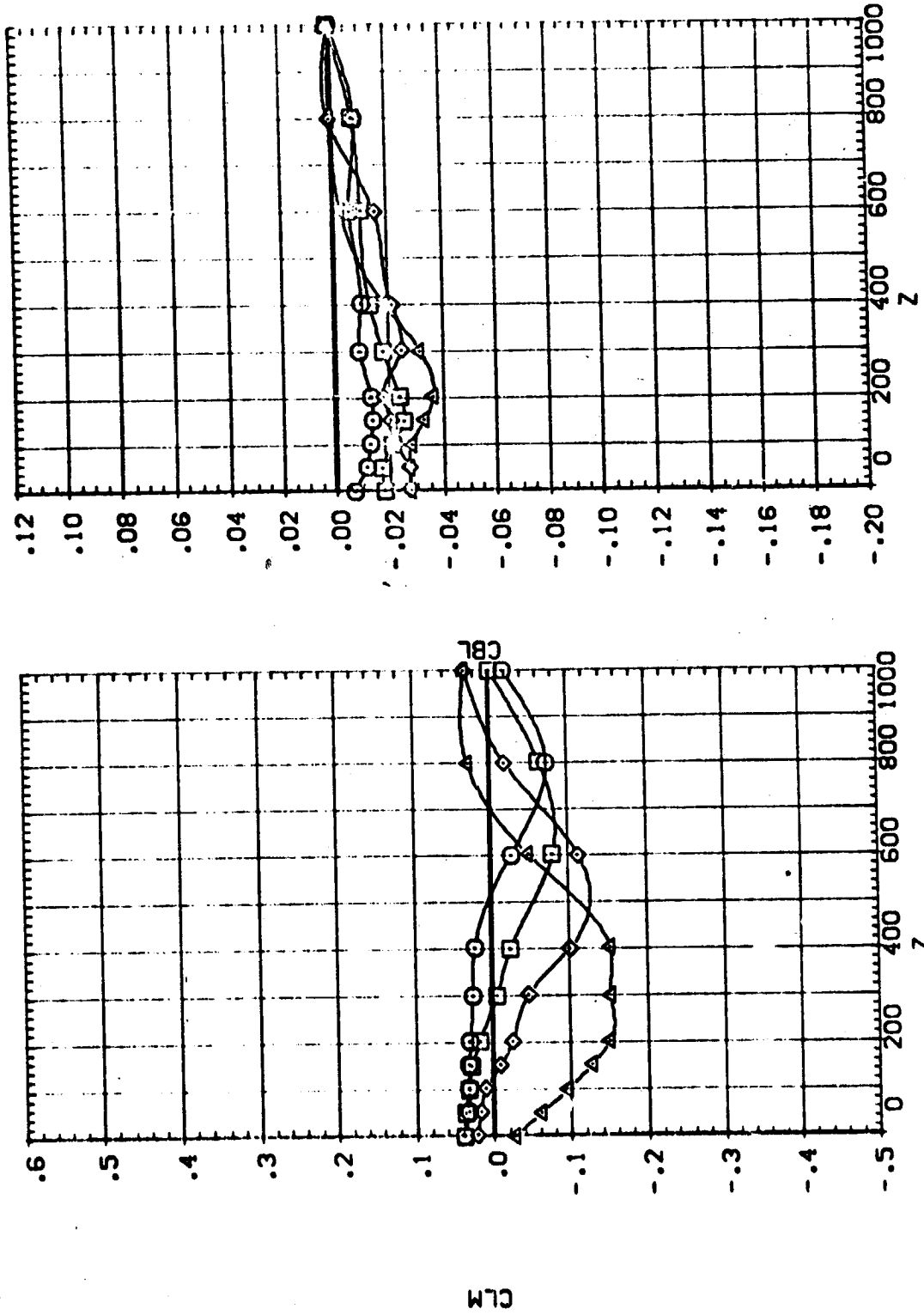
| SYMBOL | X | MACH | PARAMETRIC VALUES | |
|--------|---------|-------|-------------------|---------|
| ○ | .202 | 4.510 | PTOTAL | 29.000 |
| □ | 300.260 | .000 | BETA | .000 |
| ◇ | 600.530 | .000 | DBETA | .000 |
| △ | 900.610 | Y | PC-HBR | 750.000 |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

| | | | | | |
|--------|---|-------------------|---------|--------|---------|
| SYMBOL | X | PARAMETRIC VALUES | | | |
| | | MACH | 4.510 | PTOTAL | 29.000 |
| | | ALPHA | .000 | BETA | .000 |
| | | ALPHA | .000 | DBETA | .000 |
| | | Y | 200.000 | PCWGR | 750.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

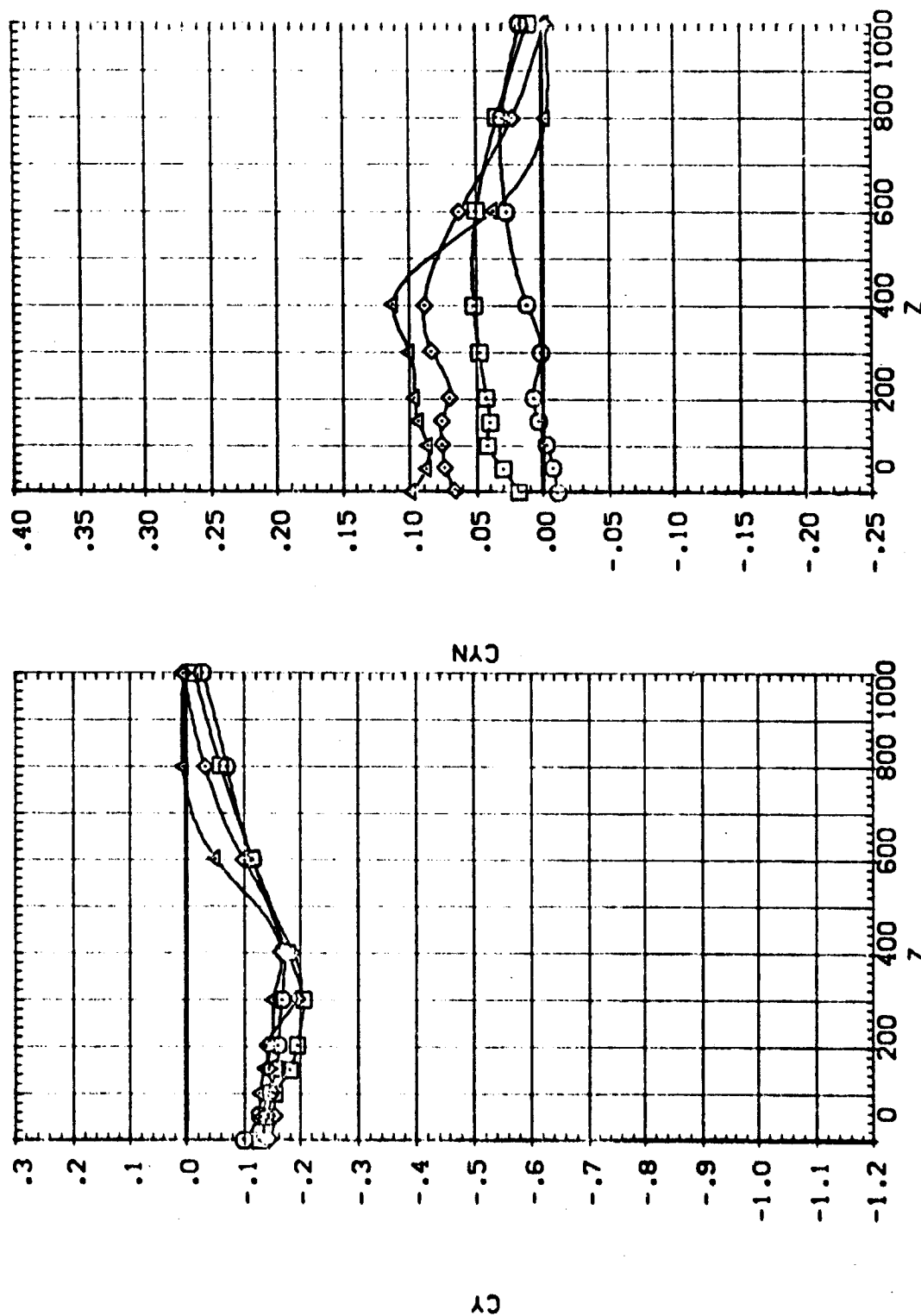


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ103)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

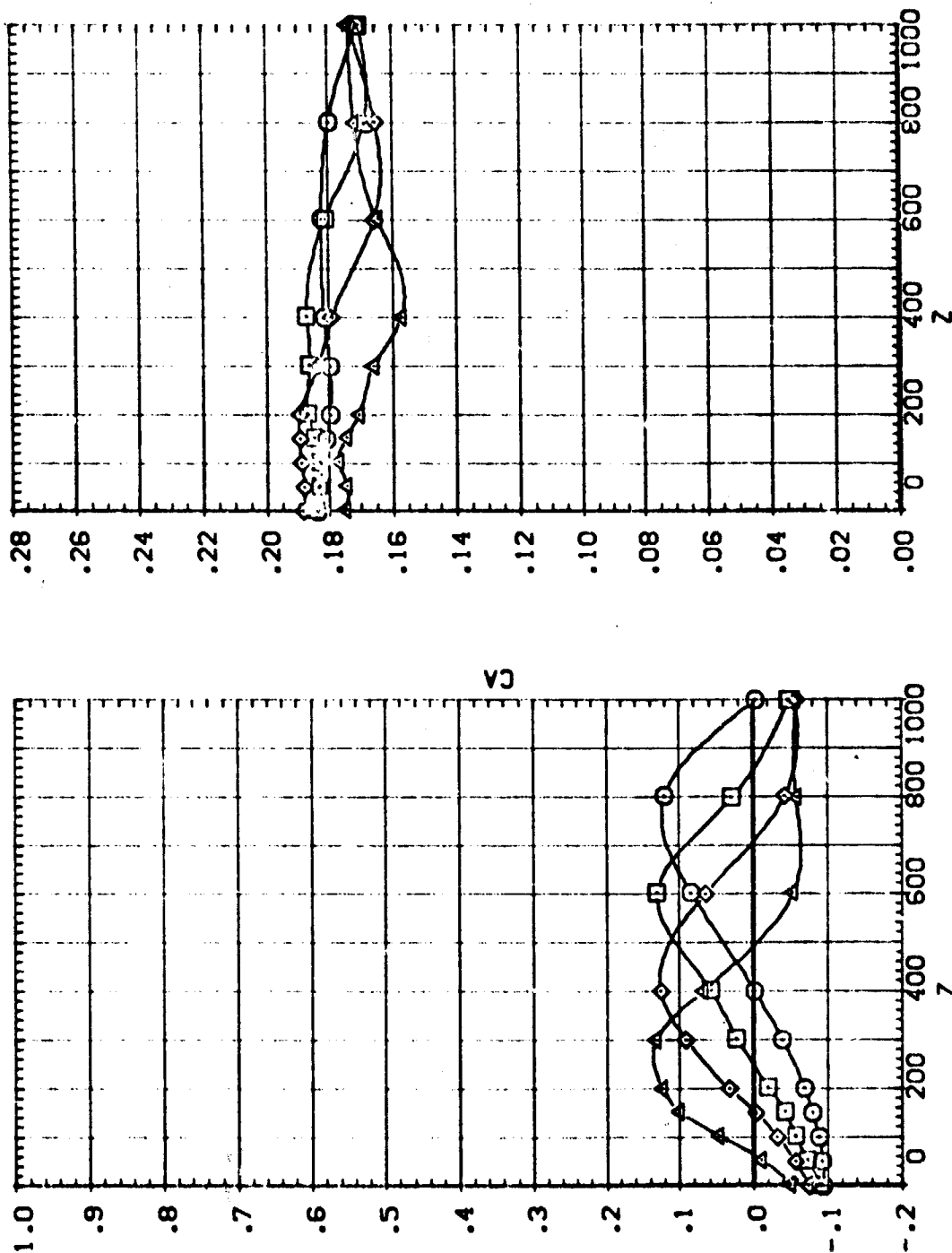
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.510 | PTOTAL | 29.000 |
| ○ | 300.260 | ALPHA | .000 | BETA | .000 |
| □ | 600.530 | DALPHA | .000 | DBETA | .000 |
| △ | 900.610 | Y | 200.000 | PC+PR | 750.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RTJ104)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|---------|
| | | MACH | 4.510 | PIDOTAL | 29.000 |
| ○ | 300.300 | ALPHA | .000 | BETA | .000 |
| □ | 600.470 | DALPHA | .000 | DBETA | .000 |
| △ | 900.500 | Y | 400.000 | PC+PBR | 750.000 |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

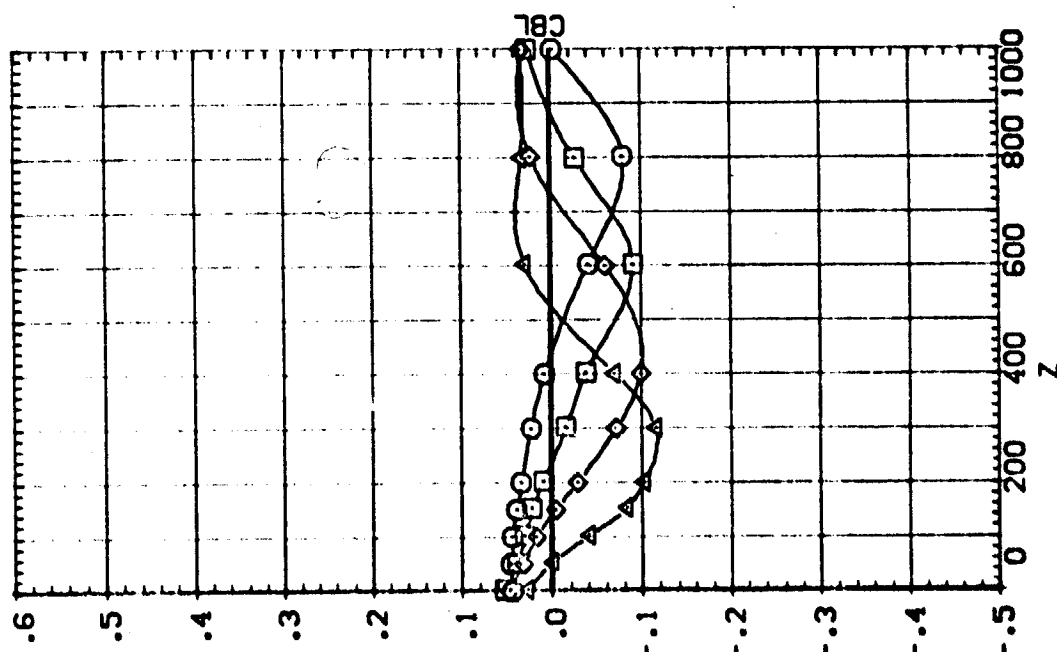
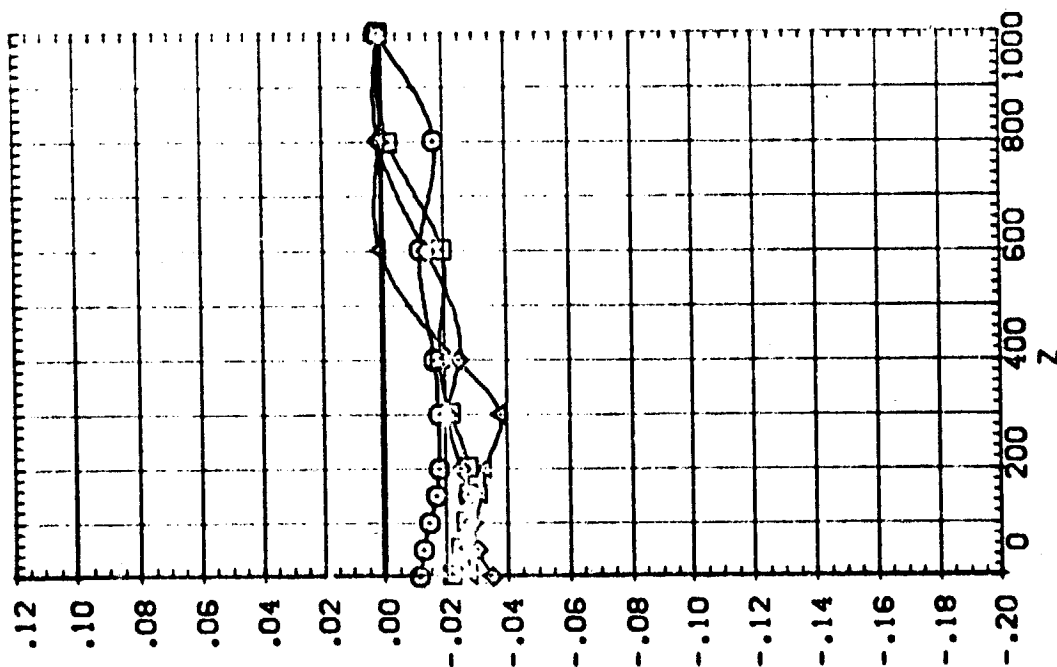
IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ104)

SYMBOL

○ □ ◇ △

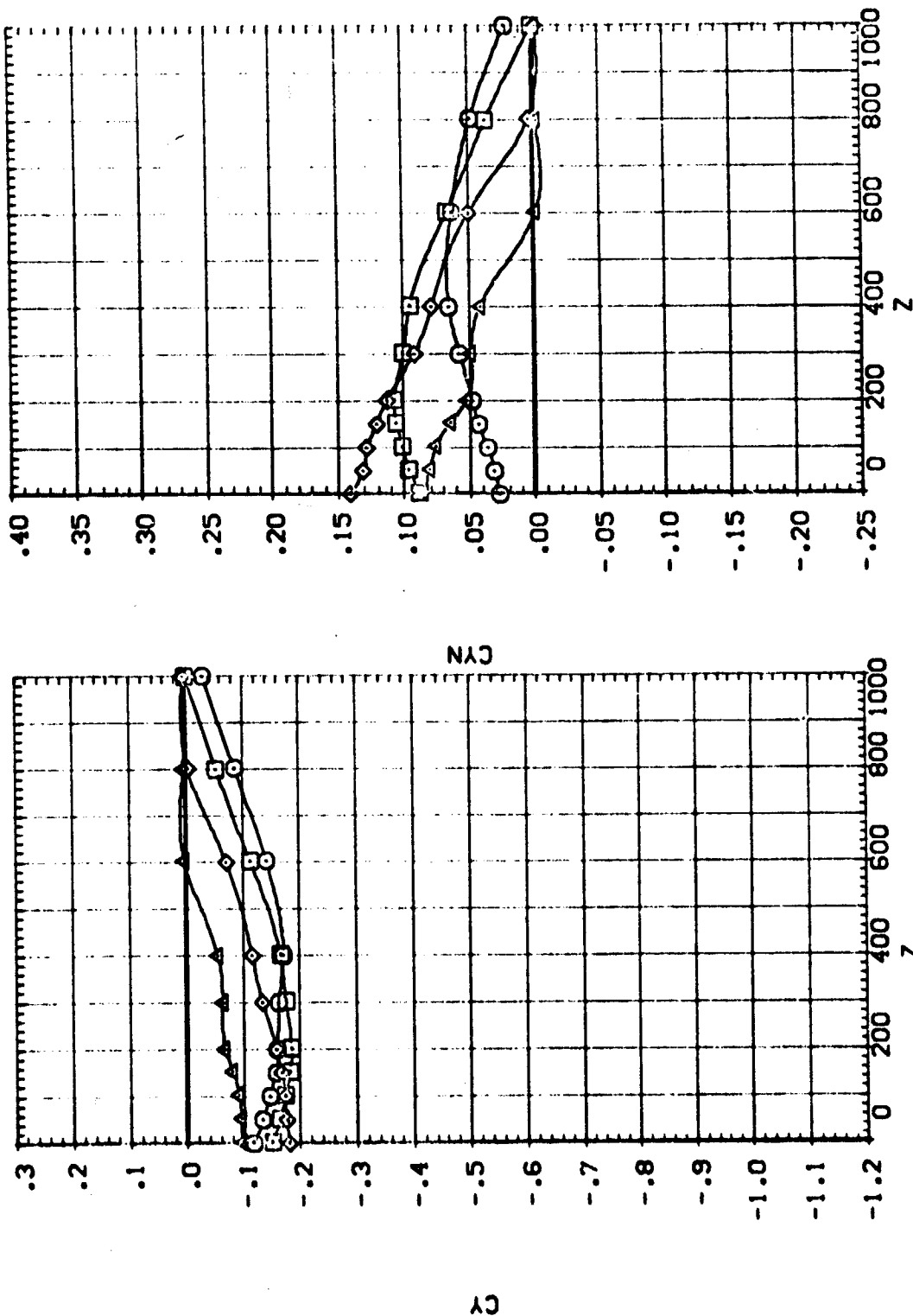
| X | MACH | PARAMETRIC VALUES |
|---------|---------|-------------------|
| 300.300 | 4.510 | P TOTAL 29.000 |
| 600.470 | .000 | BETA .000 |
| 900.500 | .000 | DBETA .000 |
| | 400.000 | PC+PR 750.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|---------|
| | | MACH | 4.510 | PTOTAL | 29.000 |
| ○ | 300.300 | ALPHA | .000 | BETA | .000 |
| □ | 600.470 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.500 | Y | 400.000 | PC+PR | 750.000 |

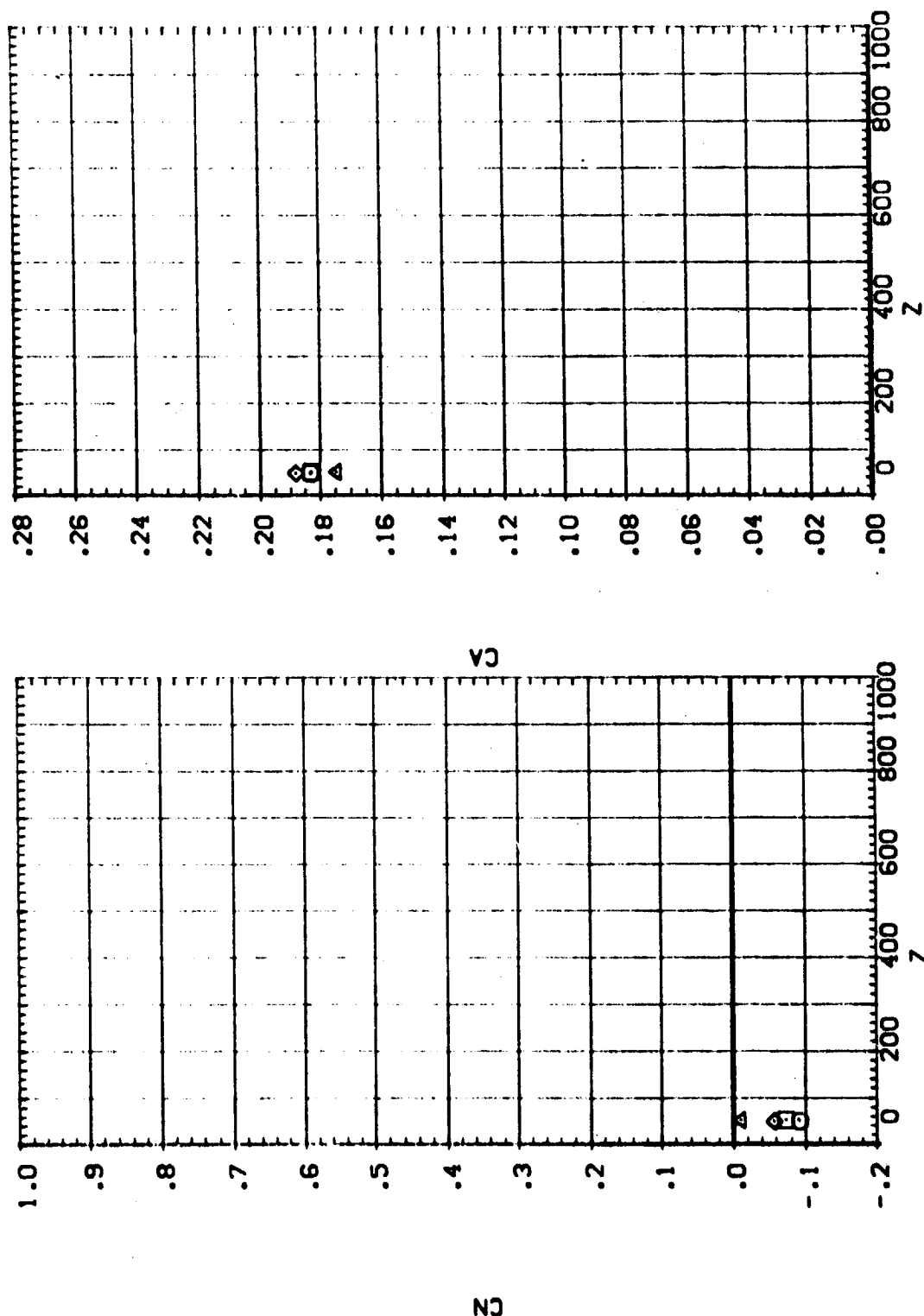


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRR(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ105)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

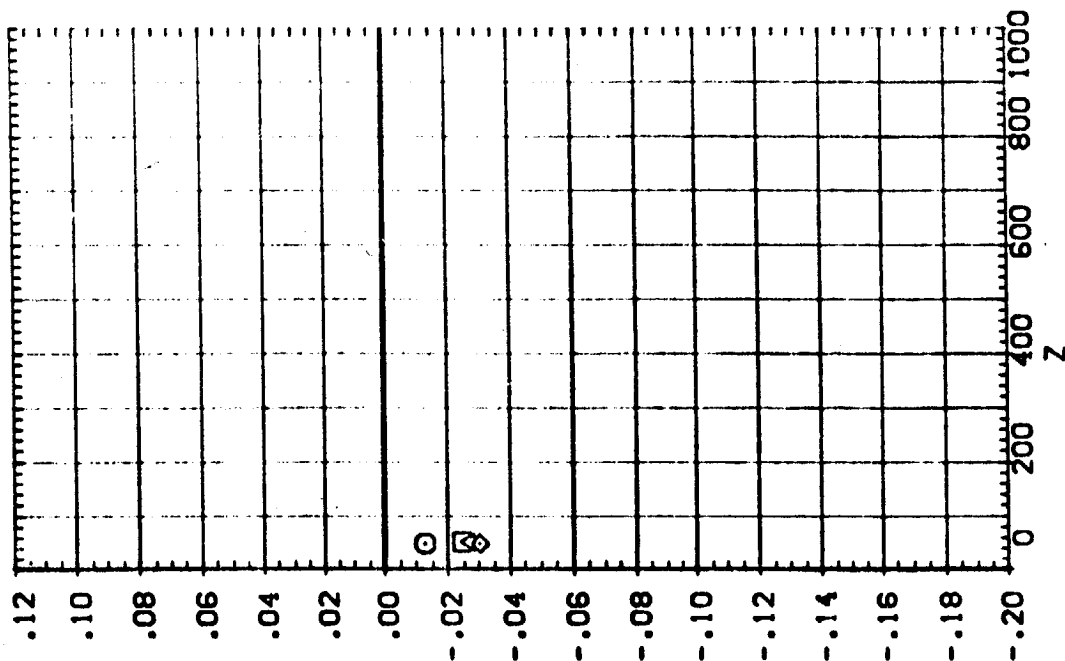
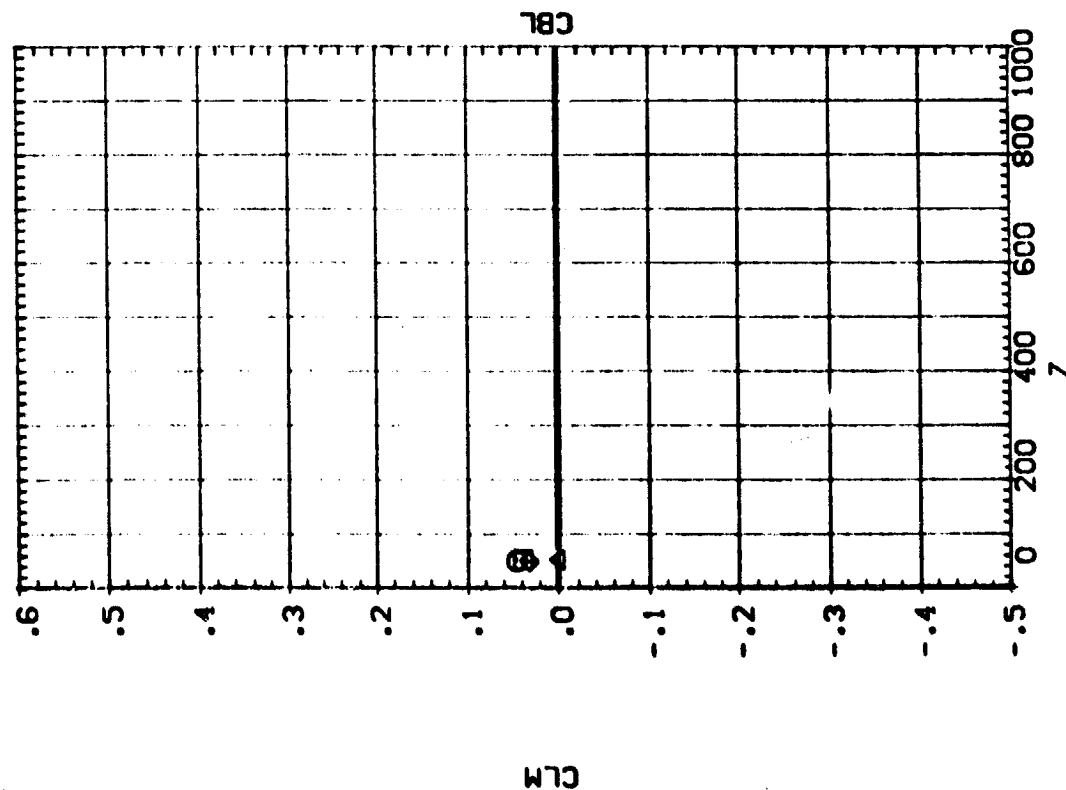
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|---------|
| | | MACH | 4.510 | TOTAL | 29.000 |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.420 | DALPHA | .000 | DBETA | .000 |
| △ | 900.640 | Y | 800.000 | PC*PR | 750.000 |



SYMBOL X

PARAMETRIC VALUES
 .224 MACH 4.510 P10TAL 29.000
 300.320 ALPHA .000 BETA .000
 600.420 DAPHA .000 DBETA .000
 900.640 Y 800.000 PC-HBR 750.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

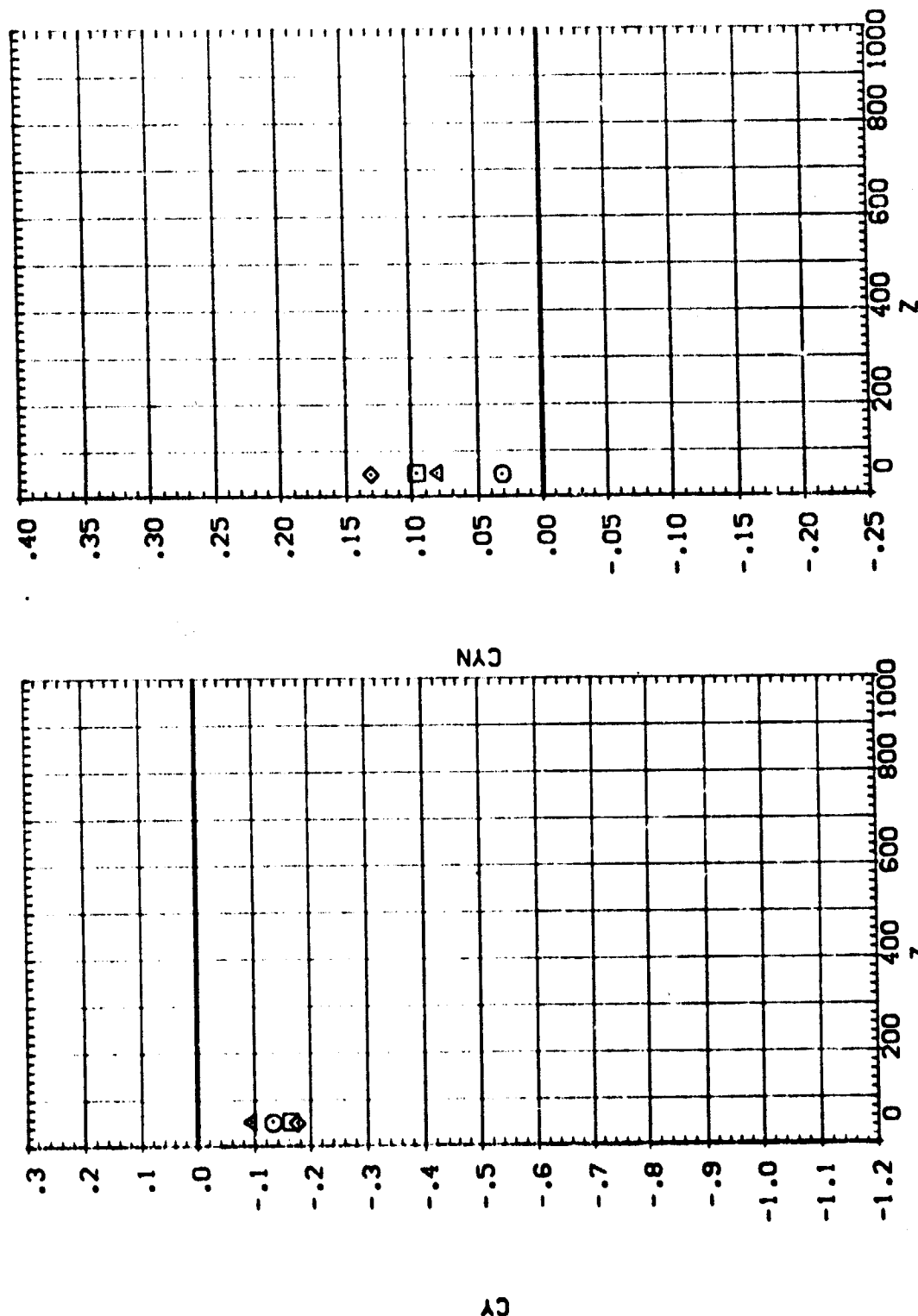


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ105)

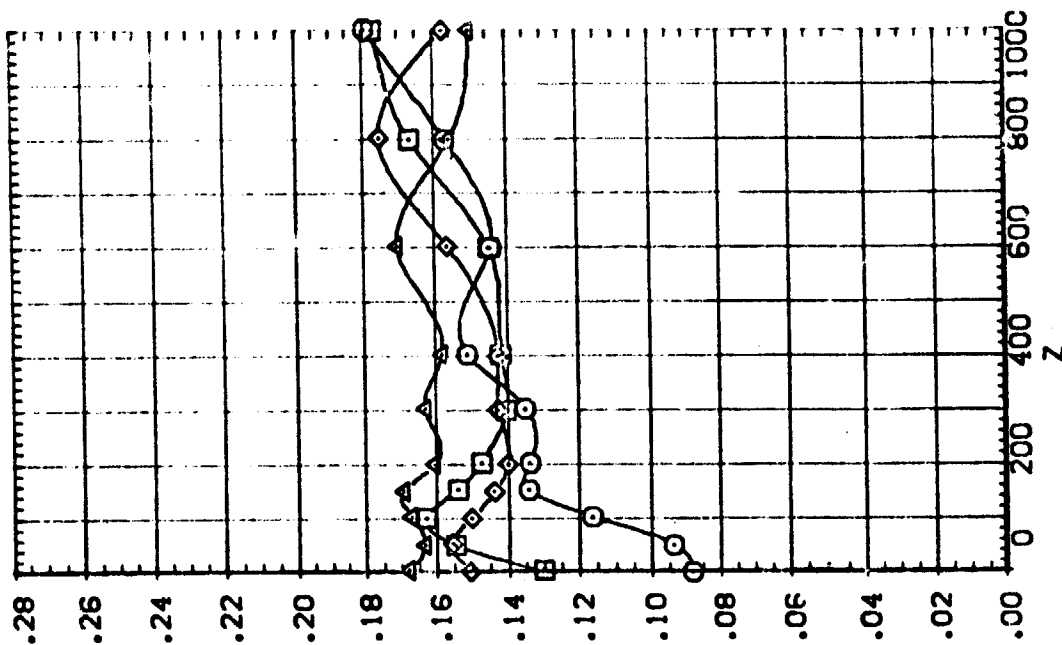
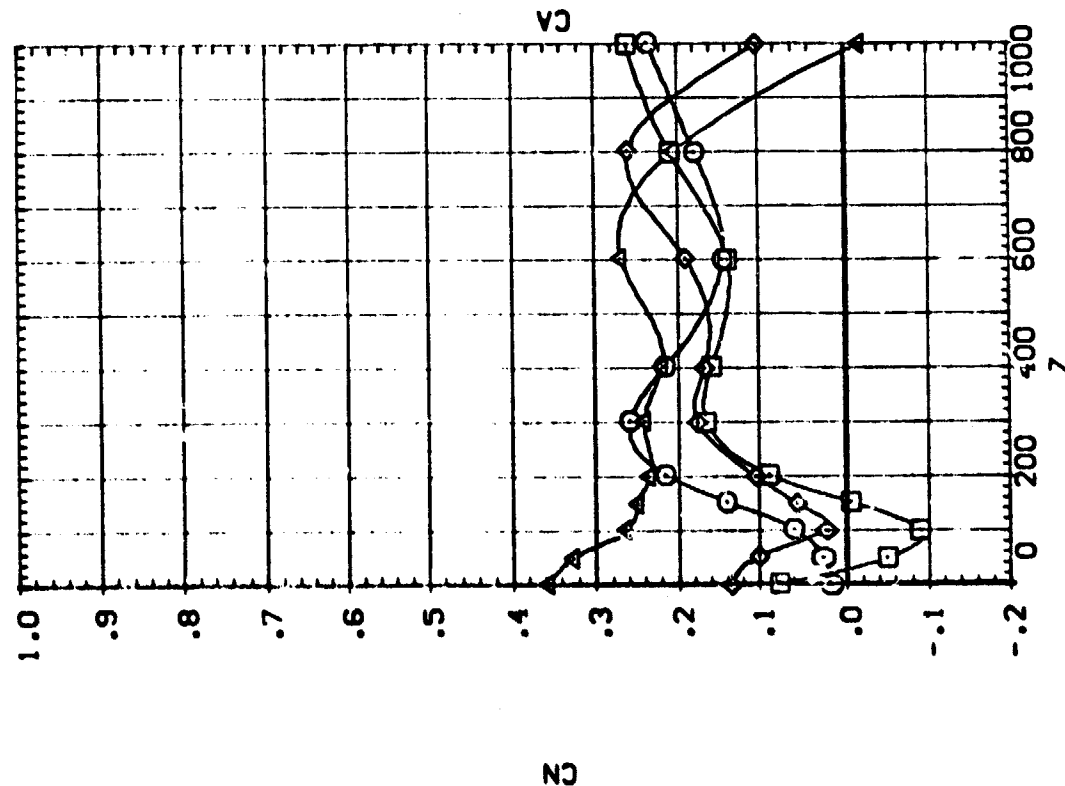
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|---------|-------------------|--------|---------|--|
| | | | 4.510 | PTOTAL | 29.000 | |
| ○ | .224 | 300.320 | .000 | BETA | .000 | |
| □ | 600.420 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.640 | Y | 800.000 | PC+PBR | 750.000 | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH TOTAL 29.000
300.180 ALPHA .000 BETA .000
600.640 DALPHA .000 DBETA .000
900.700 V .000 PC+PR 1500.000

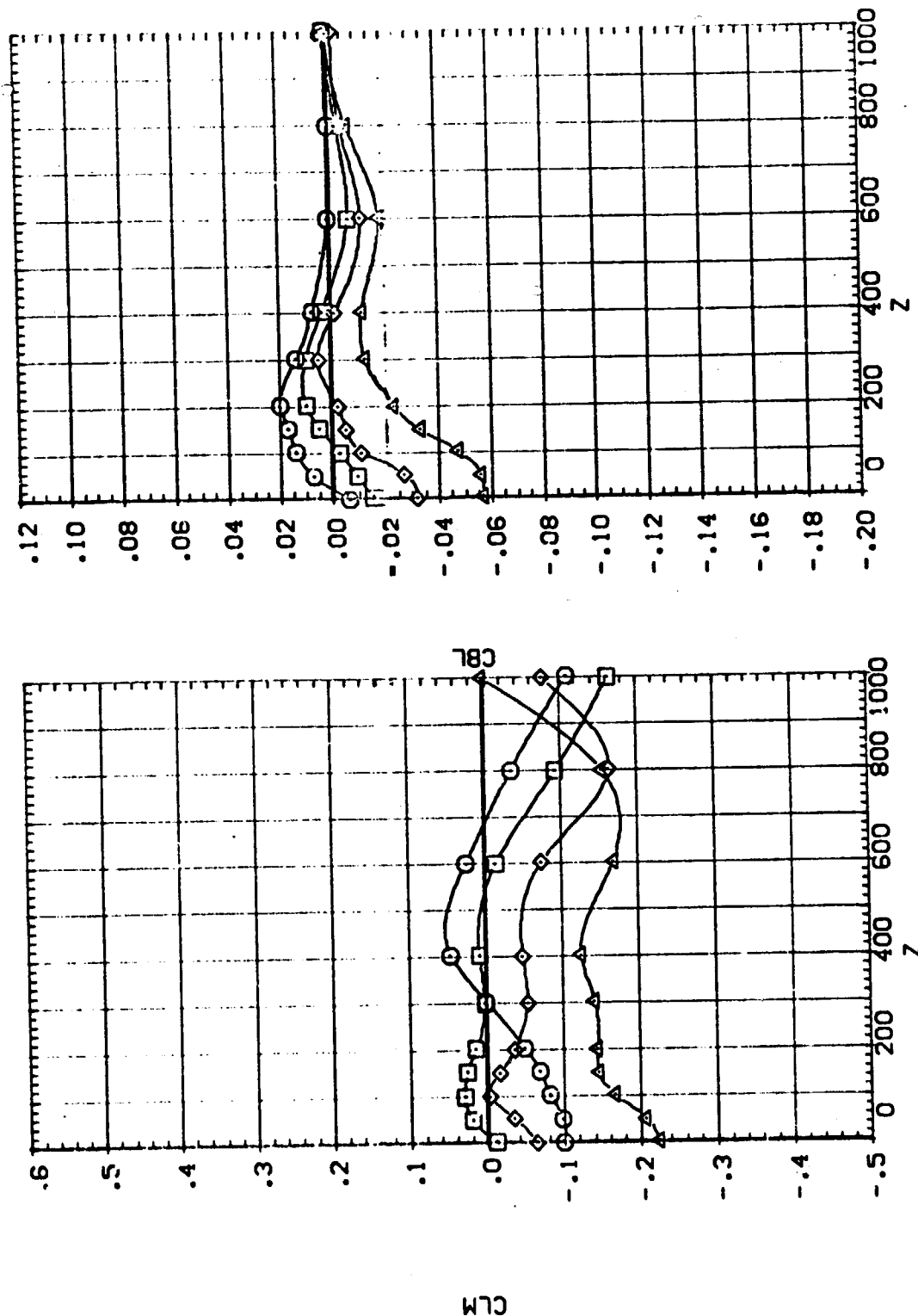


EFFECT OF SRB W/PLUMES SEPARATION ON 09B/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ106)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

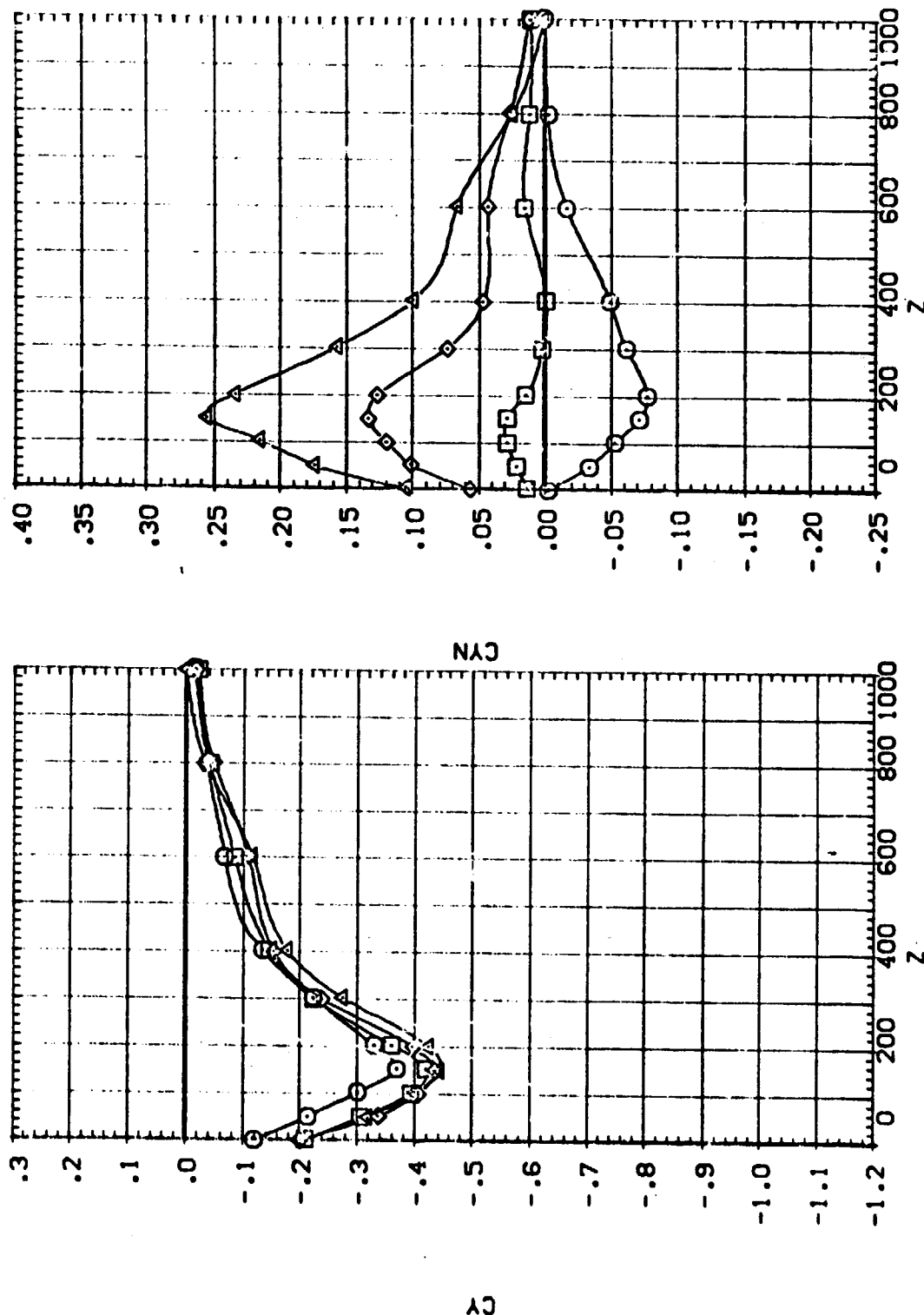
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | 4.510 | PIOTAL | 29.000 |
| ○ | 300.180 | ALPHA | .000 | BETA | .000 |
| □ | 600.640 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.700 | Y | .000 | PC+PR | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ106)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | |
|--------|---------|-------|-------------------|----------|
| ○ | .323 | ALPHA | 4.510 | PTOTAL |
| □ | 300.180 | ALPHA | .000 | BETA |
| ◇ | 600.640 | ALPHA | .000 | DBETA |
| △ | 900.700 | Y | .000 | PC+SR |
| | | | | 1500.000 |

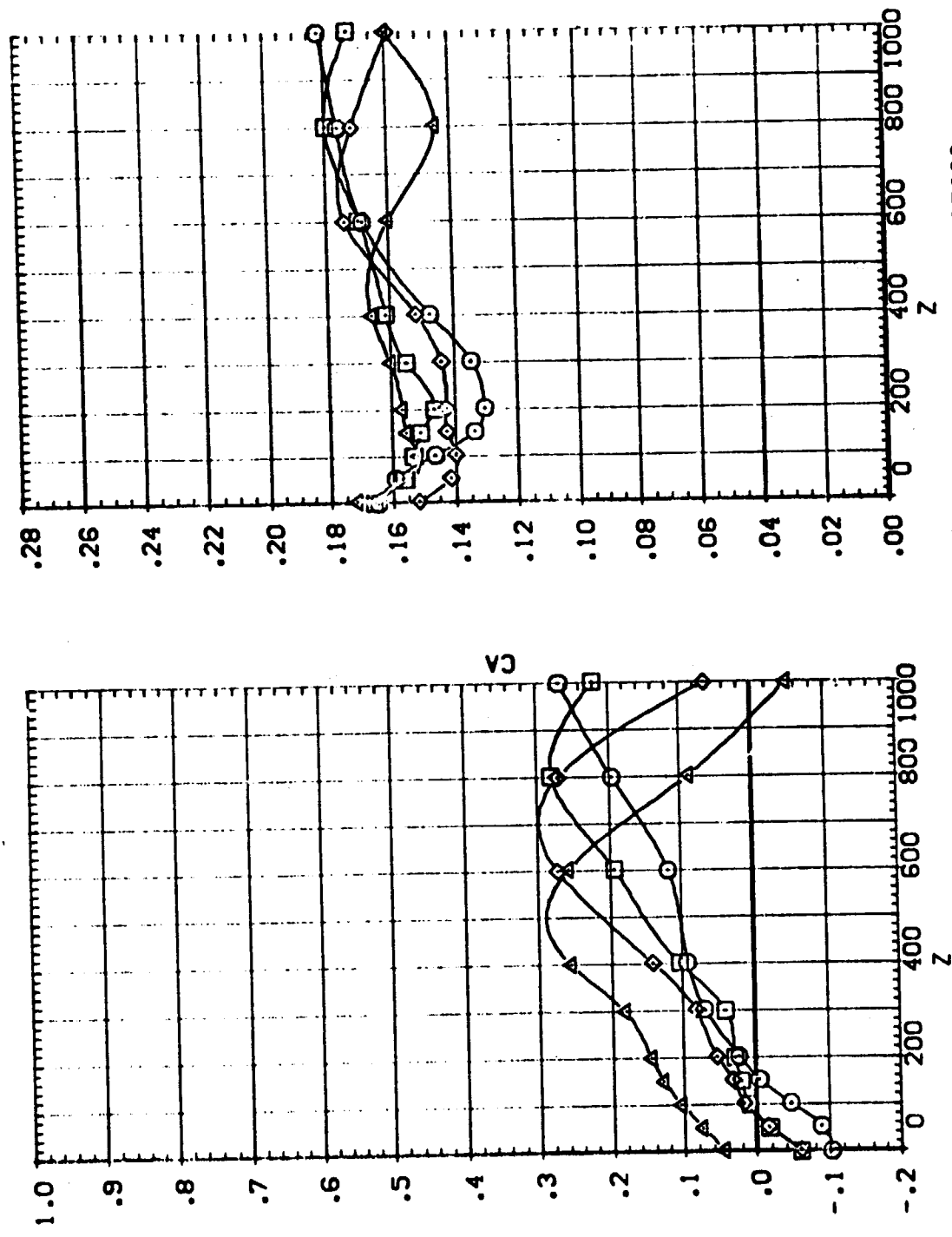


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ107)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

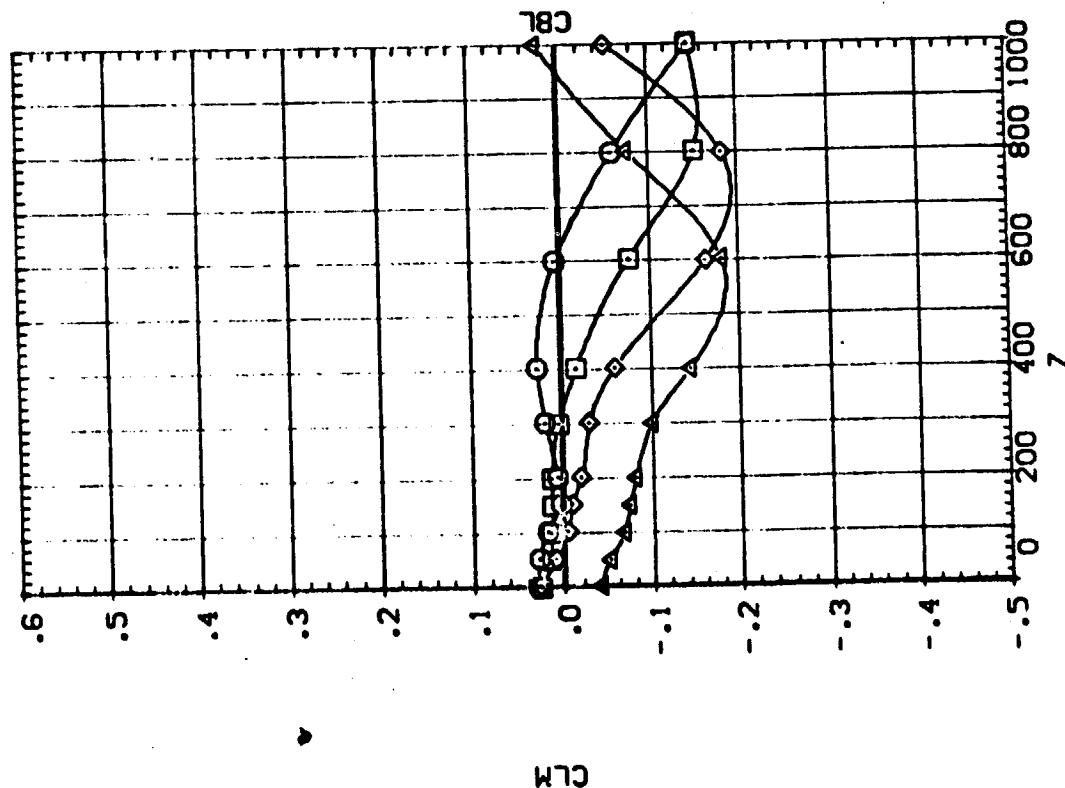
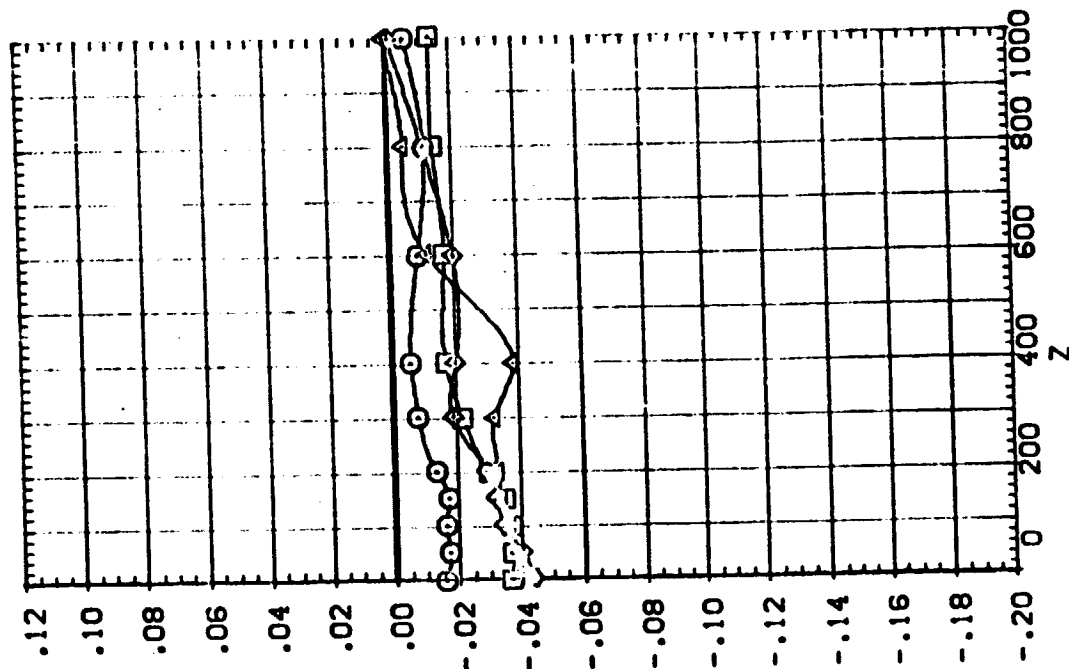
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|---------|----------|--|
| | | MACH | 4.510 | PIDOTAL | 29.000 | |
| ○ | 239 | ALPHA | .000 | BETA | .000 | |
| □ | 300.330 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 600.450 | Y | 200.000 | PC-HGR | 1500.000 | |
| △ | 900.580 | | | | | |



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ107)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|----------|
| | | MACH | 4.510 | PITOT | 29.000 |
| ○ | 300.330 | ALPHA | .000 | BETA | .000 |
| □ | 600.450 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.580 | Y | 200.000 | PC-PR | 1500.000 |

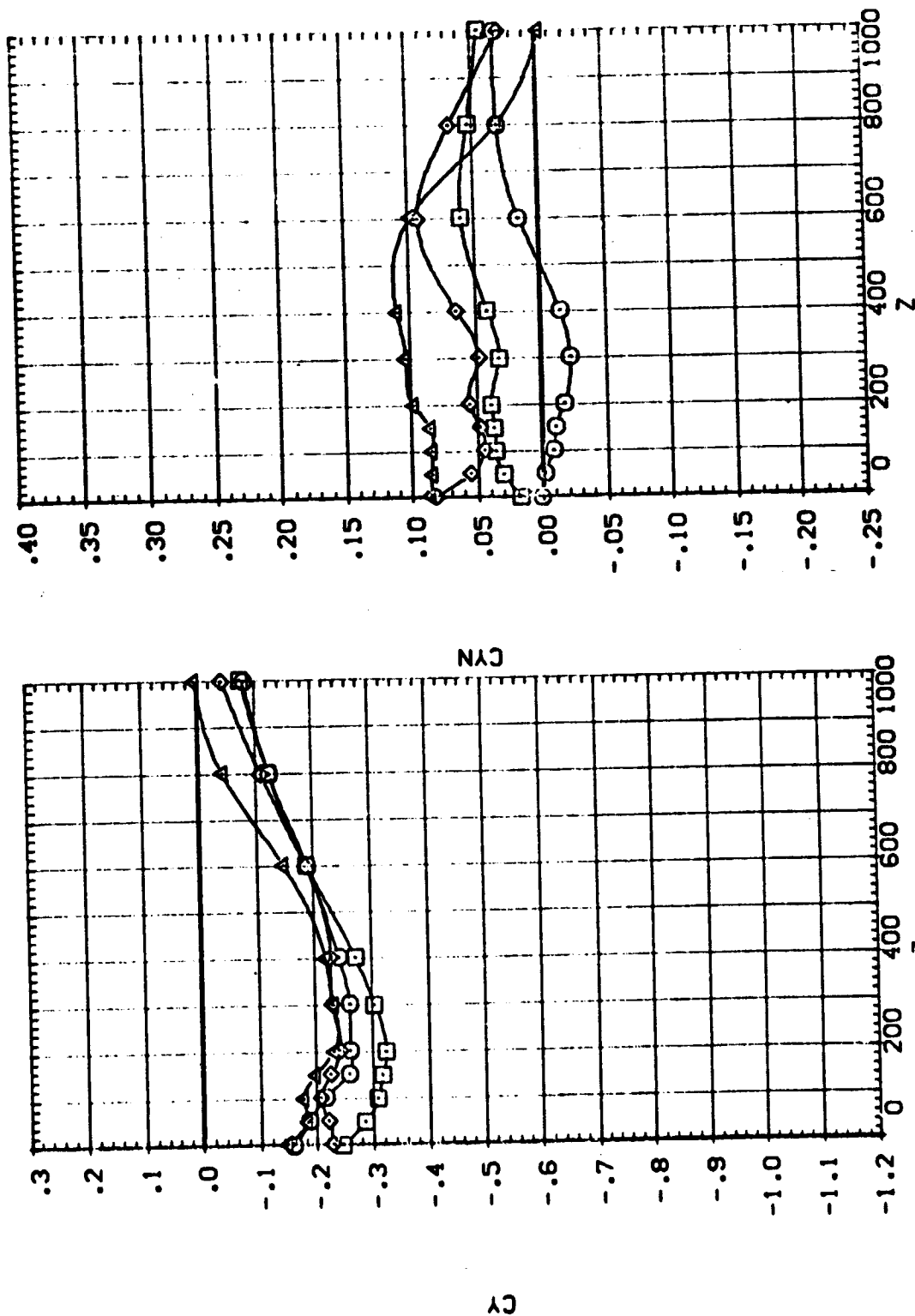


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB WITH PLUMES SEPARATING FROM 09T10 (RTJ107)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

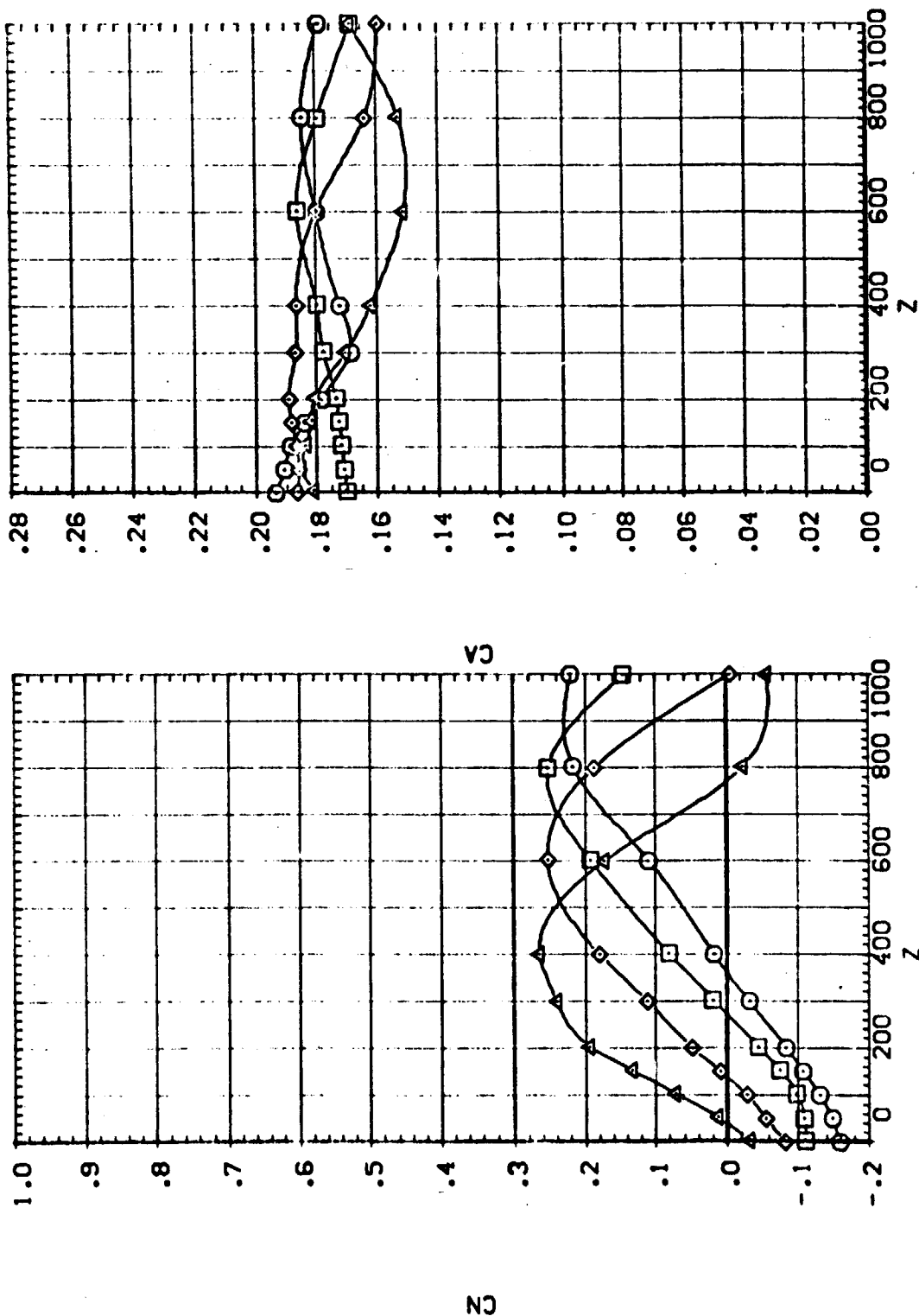
| SYMBOL | X | MACH | PARA | METRIC VALUES | |
|--------|---------|---------|---------|---------------|--|
| . | 300.330 | 4.510 | PITOTAL | 29.000 | |
| □ | 600.450 | .000 | BETA | .000 | |
| ◇ | 900.580 | .000 | DBETA | .000 | |
| △ | | 200.000 | PC+PBR | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ108)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|---------|----------|--|
| | | | 4.510 | P TOTAL | 29.000 | |
| ○ | 300.400 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.500 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.490 | Y | 400.000 | PCWBR | 1500.000 | |

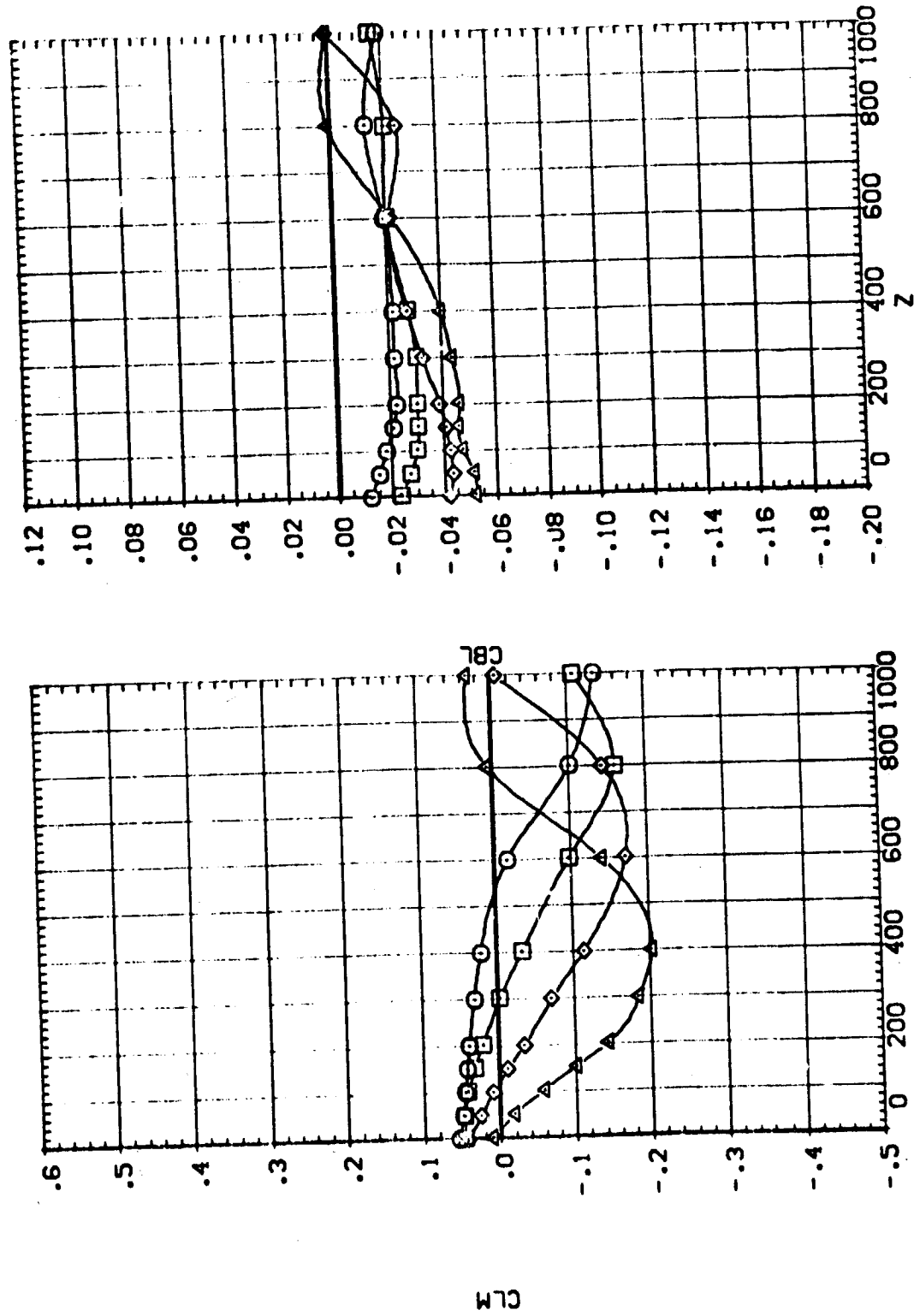


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ108)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | PTOTAL | 29.000 | |
| ○ | 300.400 | ALPHA | .000 | BETA | .000 | |
| □ | 600.500 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.490 | Y | 400.000 | PC+PBR | 1500.000 | |

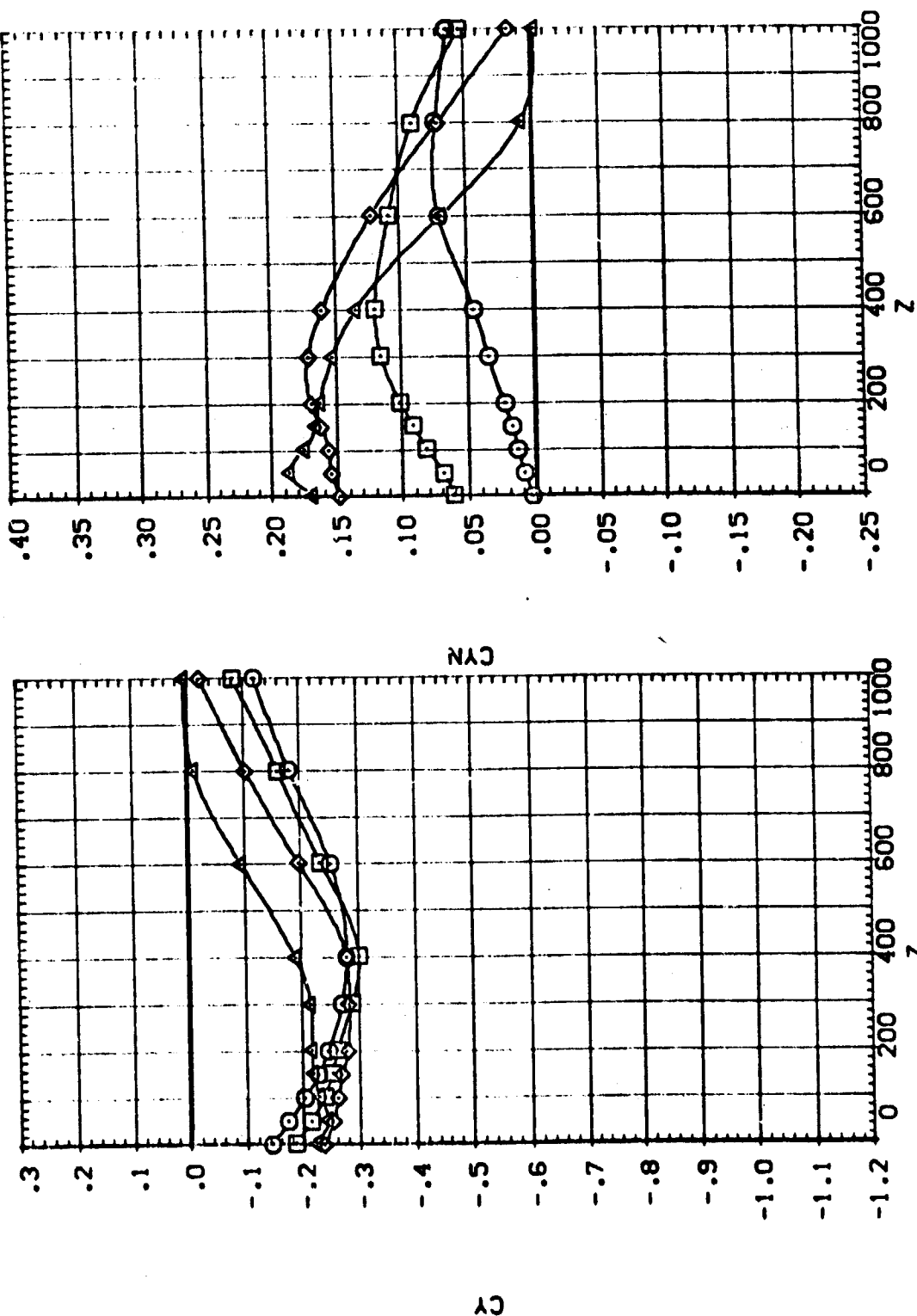


EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ108)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | |
|--------|---------|---------|-------------------|----------|
| ○ | .187 | 4.510 | PTOTAL | .29.000 |
| □ | 300.400 | .000 | BETA | .000 |
| ◇ | 600.500 | .000 | DBETA | .000 |
| △ | 900.490 | 400.000 | PC+PBR | 1500.000 |

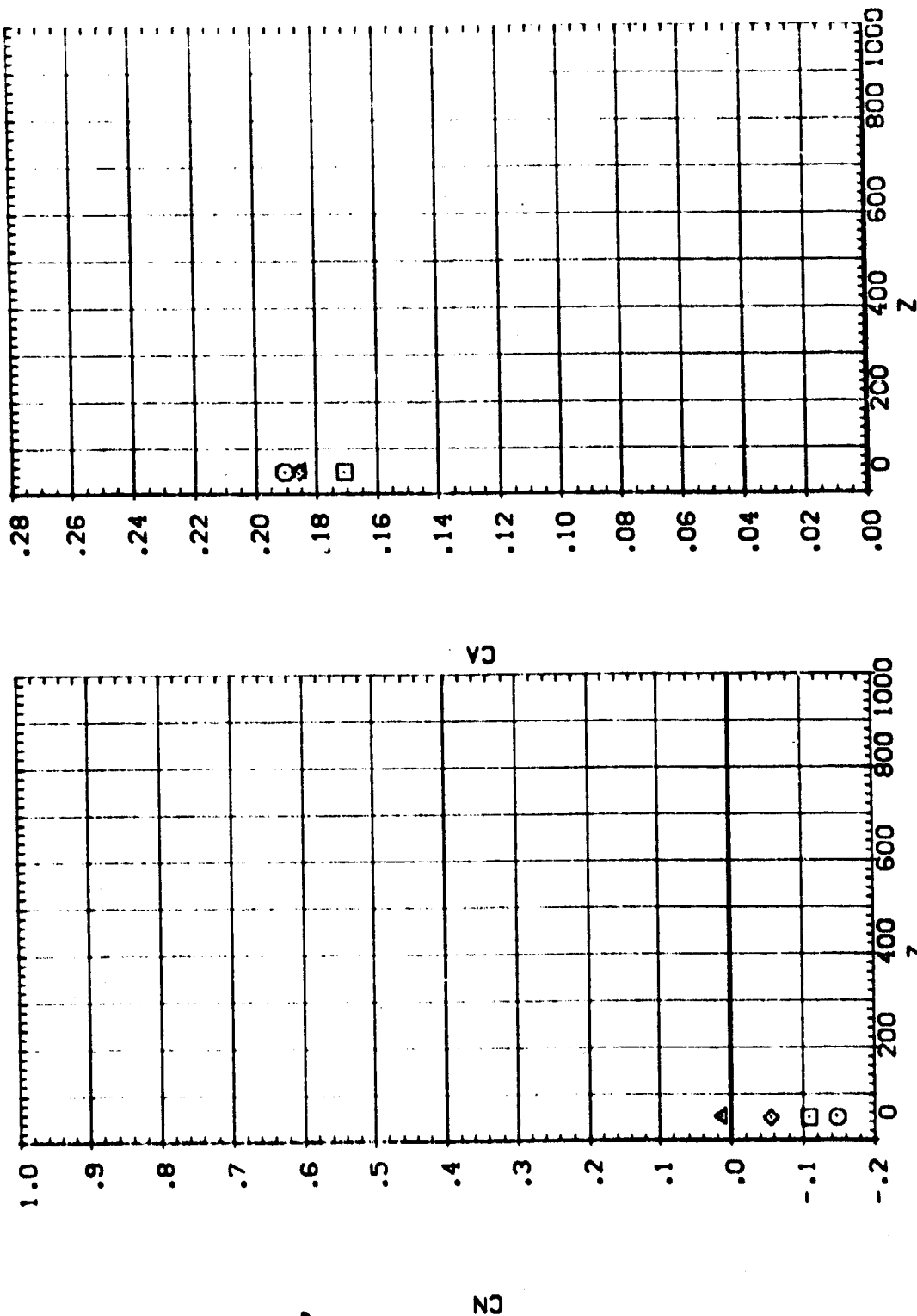


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ109)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 29.000 |
| □ | 300.390 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.390 | DALPHA | .000 | DBETA | .000 |
| △ | 900.720 | Y | 800.000 | PC-HSR | 1500.000 |

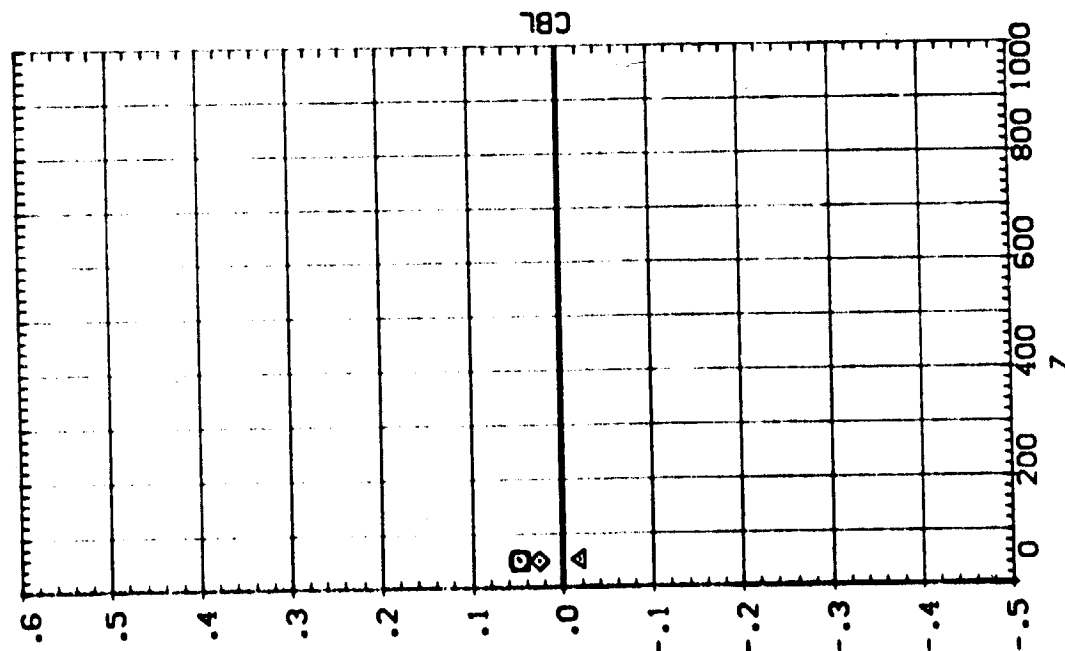
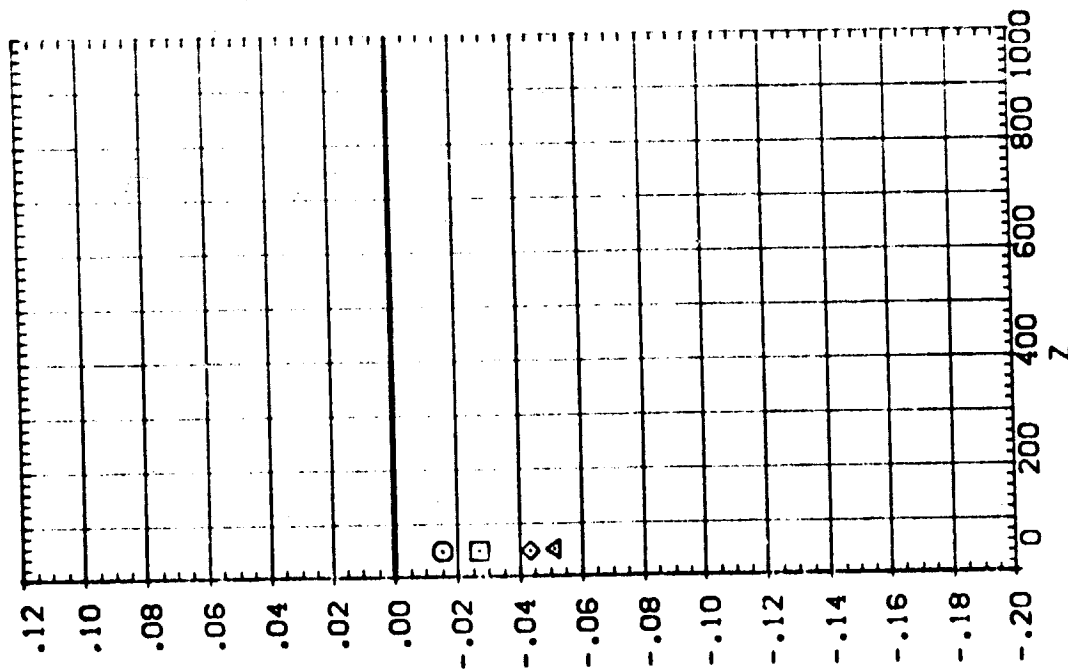


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ109)

SYMBOL
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 X .244 MACH 4.510 PTOTAL 29.000
 300.390 ALPHA .000 BETA .000
 500.390 DIALPHA .000 DBETA .000
 900.720 Y 800.000 PC+PR 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

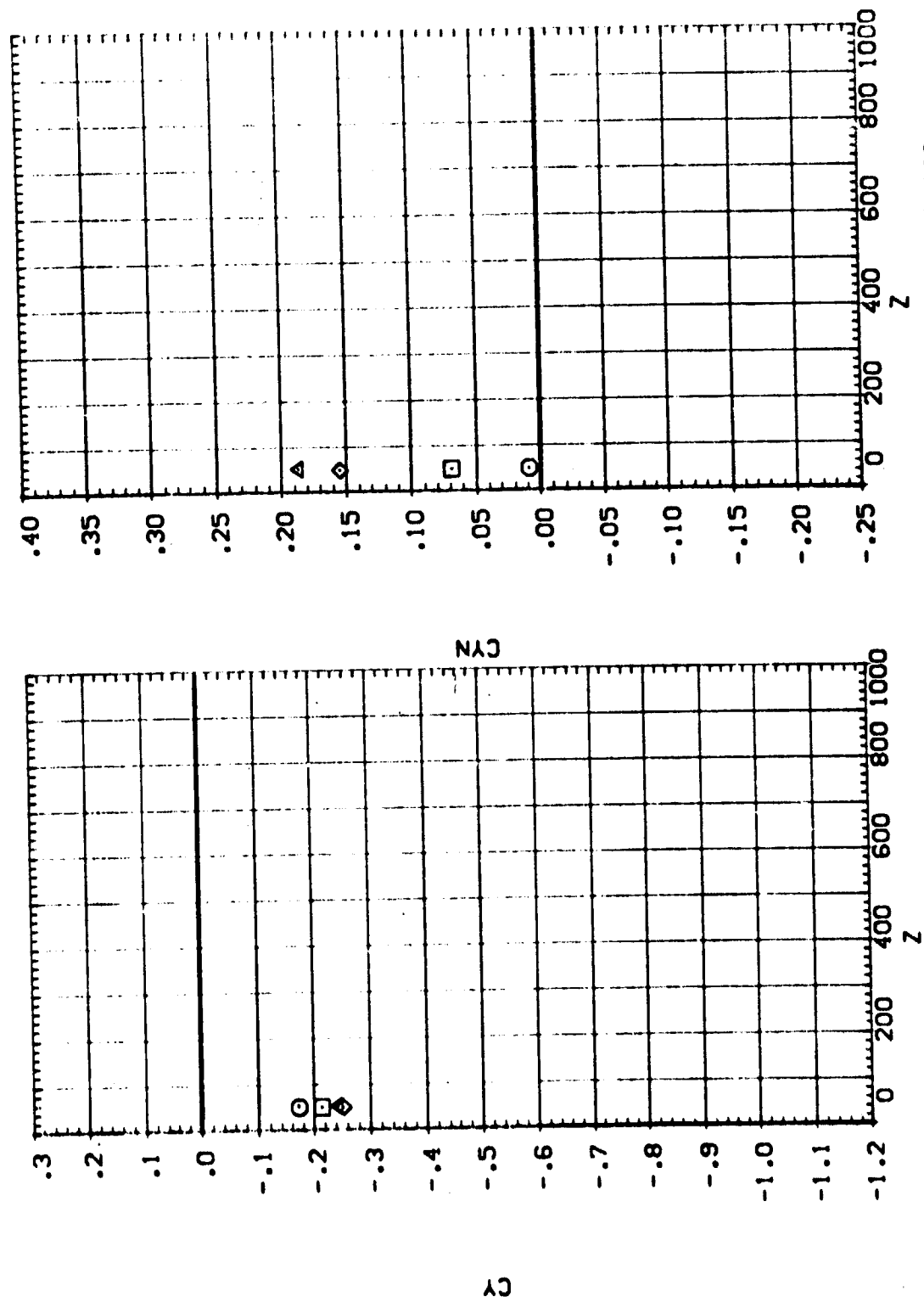


EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ109)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|---------|----------|--|
| | | MACH | 4.510 | PITOTAL | 29.000 | |
| ○ | 300.390 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.390 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.720 | Y | 800.000 | PC+PBR | 1500.000 | |



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09110 (RIJ110)

SYMBOL

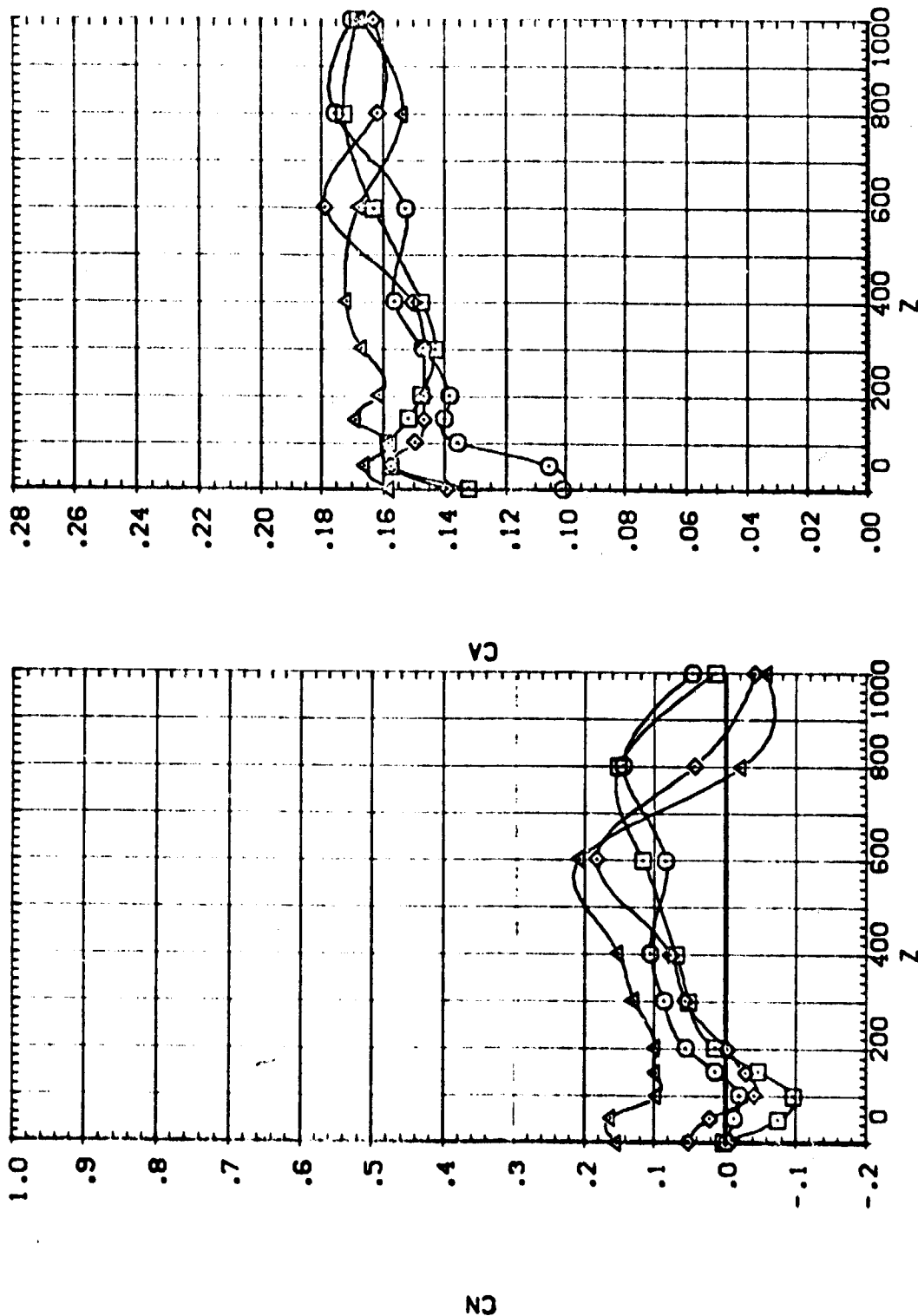
○ 300.340
 □ 600.510
 ◇ 900.690

MACH .194
 ALPHA
 DELTA
 Y
 PC+PR 1500.000

PARAMETRIC VALUES

4.520 PTOTAL 58.000
 .000 BETA .000
 .000 DBETA .000
 .000 PC+PR 1500.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR AL DATASETS

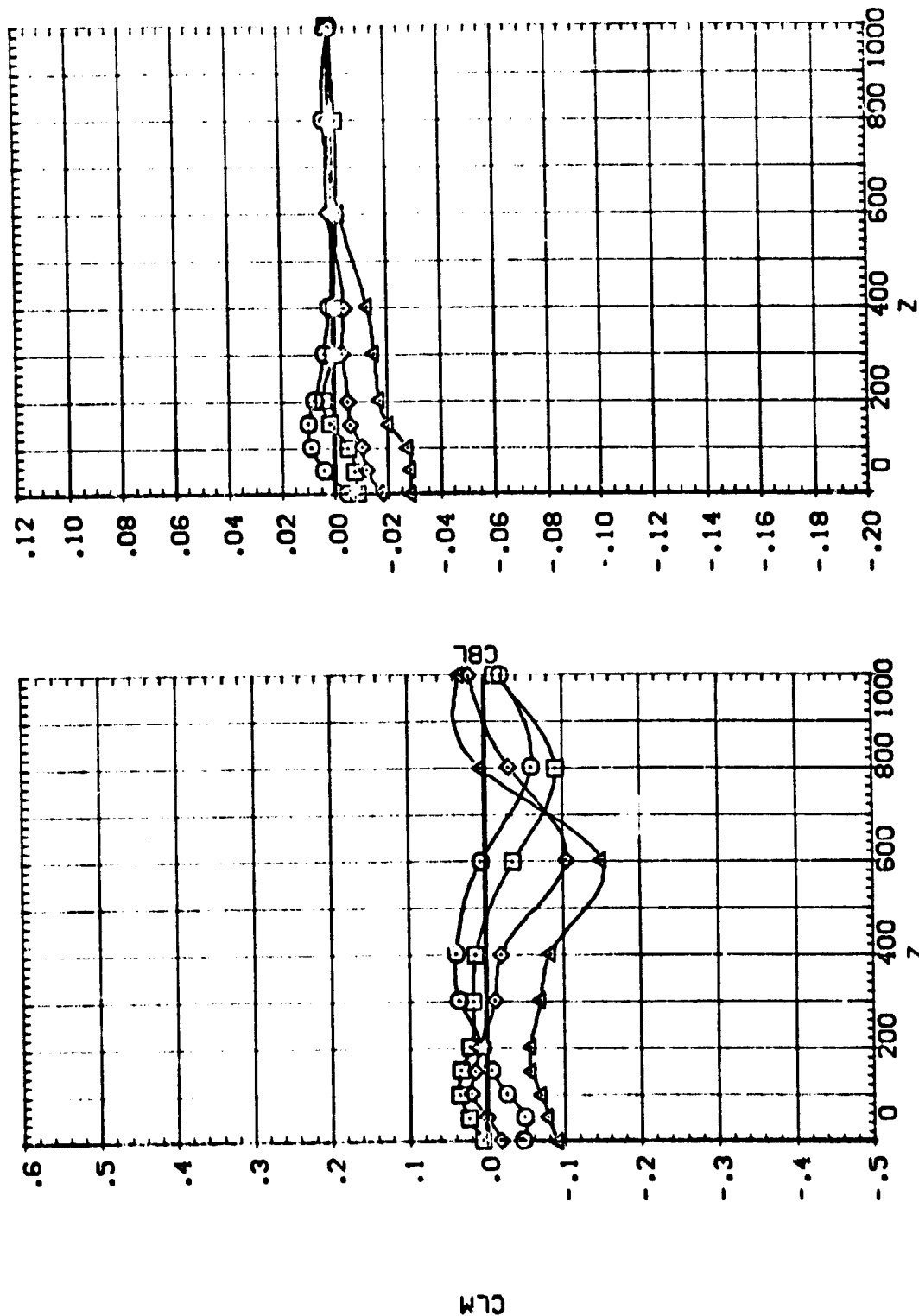


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ110)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

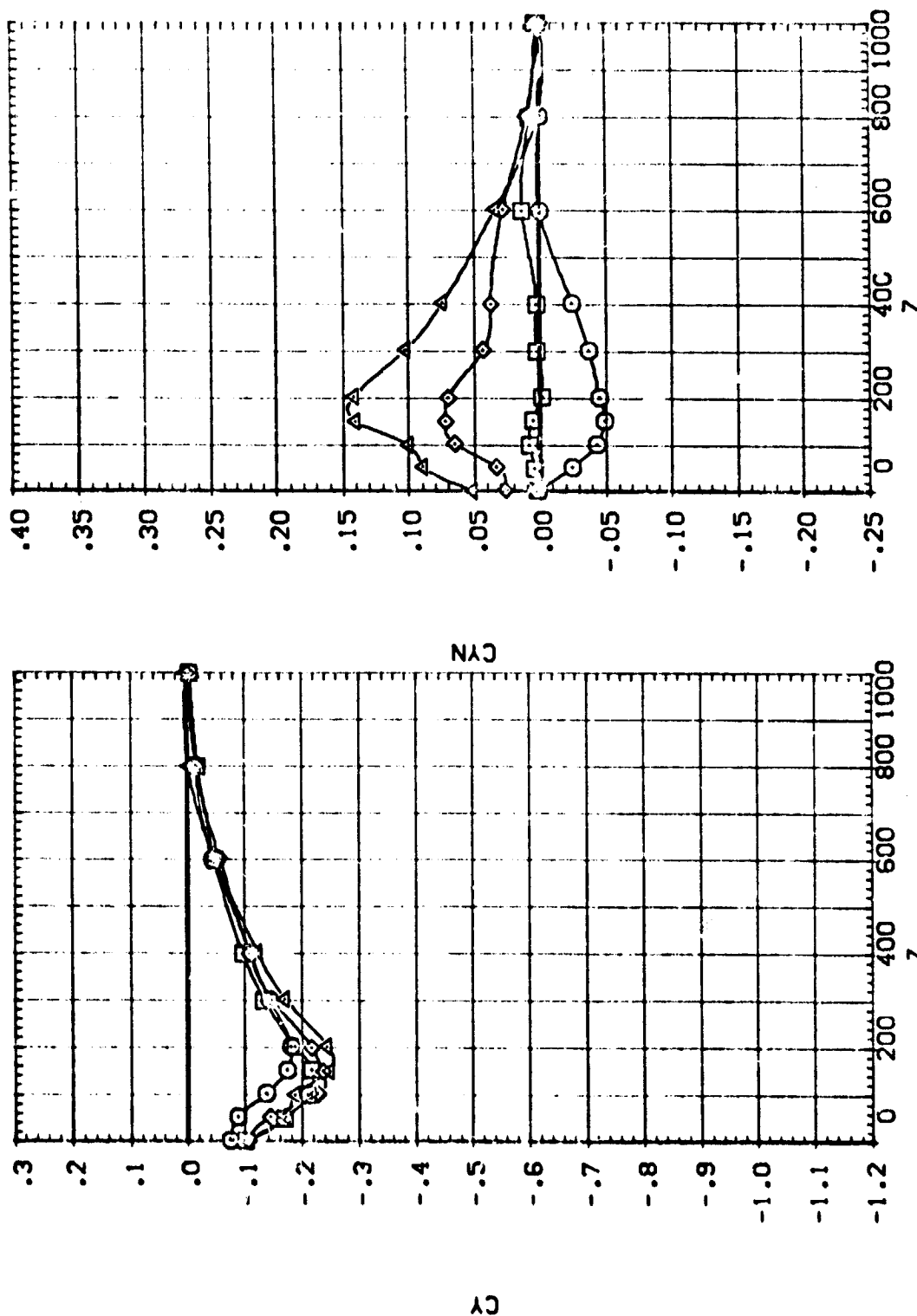
| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | .194 | 4.520 | PTOTAL 58.000 |
| □ | 300.340 | .000 | BETA .000 |
| ◇ | 600.510 | .000 | DBETA .000 |
| △ | 900.690 | .000 | PC-HBR 1500.000 |



[A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ110)]

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYM-BOL | X | PARAMETRIC VALUES | | | | |
|---------|---------|-------------------|-------|---------|----------|--|
| | | MACH | 4.520 | P TOTAL | 58.000 | |
| ○ | 300.340 | ALPHA | .000 | BETA | .000 | |
| □ | 600.510 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.690 | V | .000 | PC-MBR | 1500.000 | |

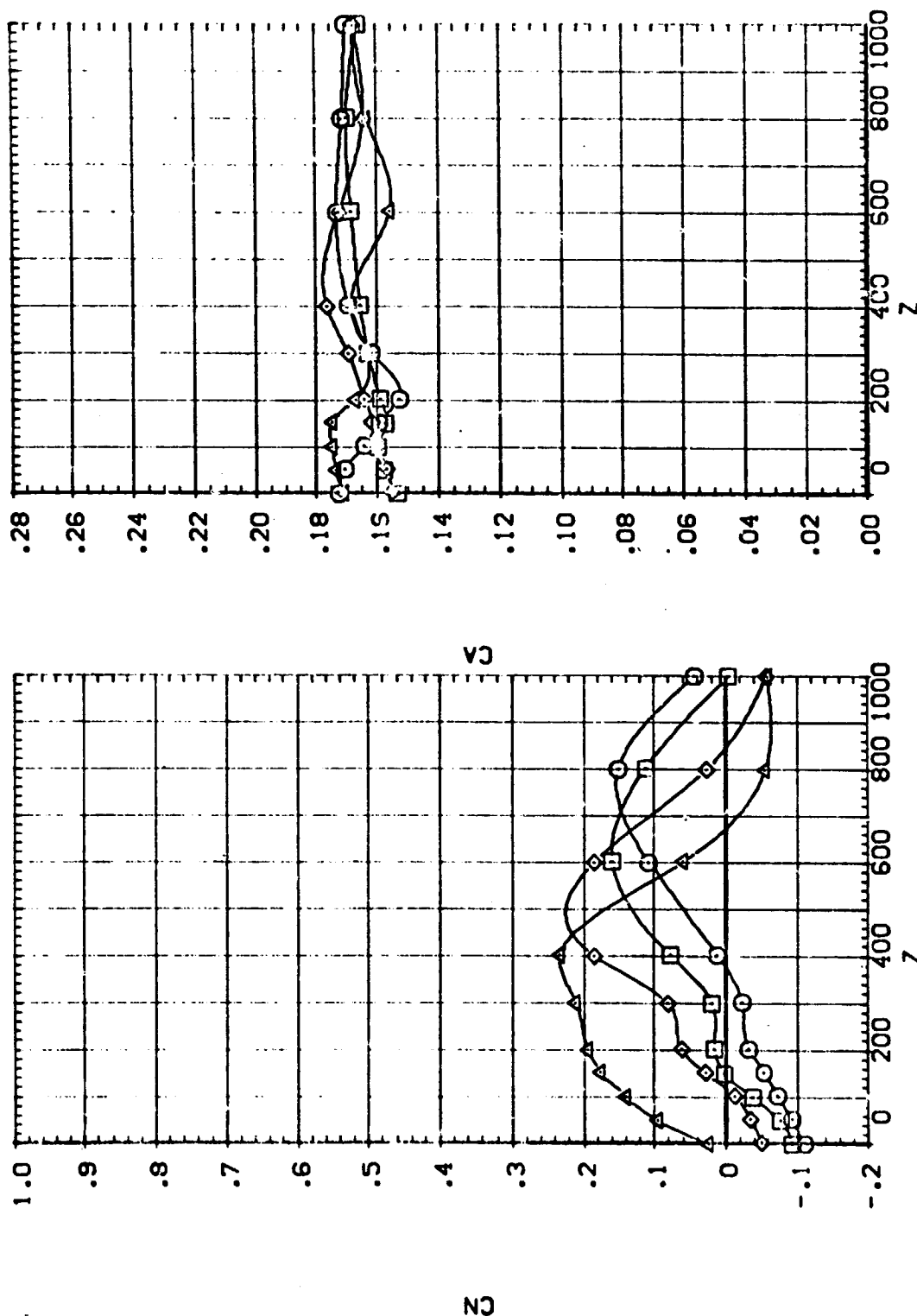


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ111)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|-------|
| | | ACH | PIOTAL | BETA | PCHMR |
| ○ | .151 | 4.520 | 58.000 | | |
| ◇ | 300.440 | .000 | .000 | .000 | |
| △ | 600.370 | .000 | .000 | .000 | |
| | 900.570 | 200.000 | 1500.000 | | |

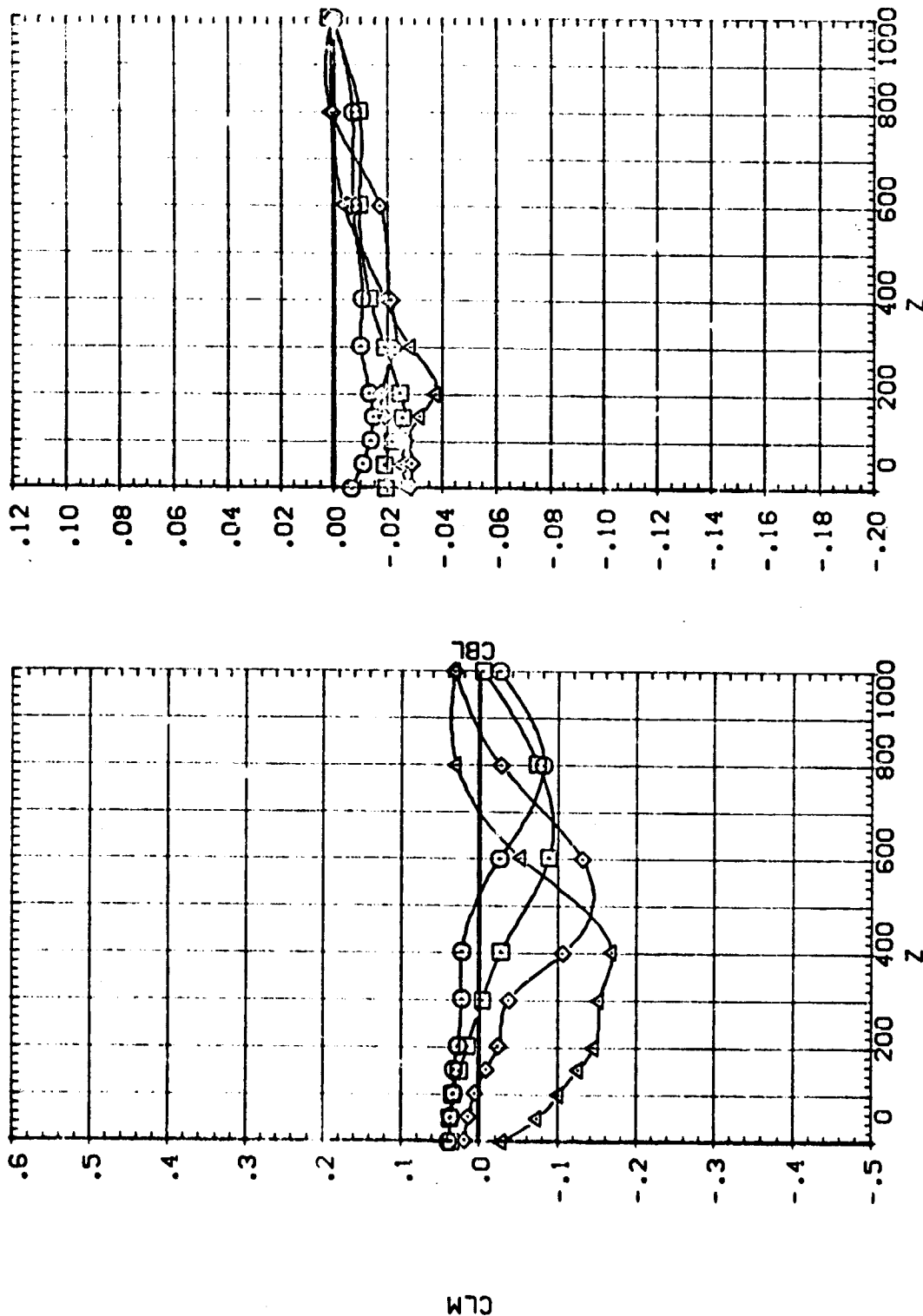


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA'S.3RB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ111)

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.520 | PTOTAL | 58.000 | |
| ○ | 300.440 | A MA | .000 | BETA | .000 | |
| □ | 600.370 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.570 | V | 200.000 | PC-HR | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

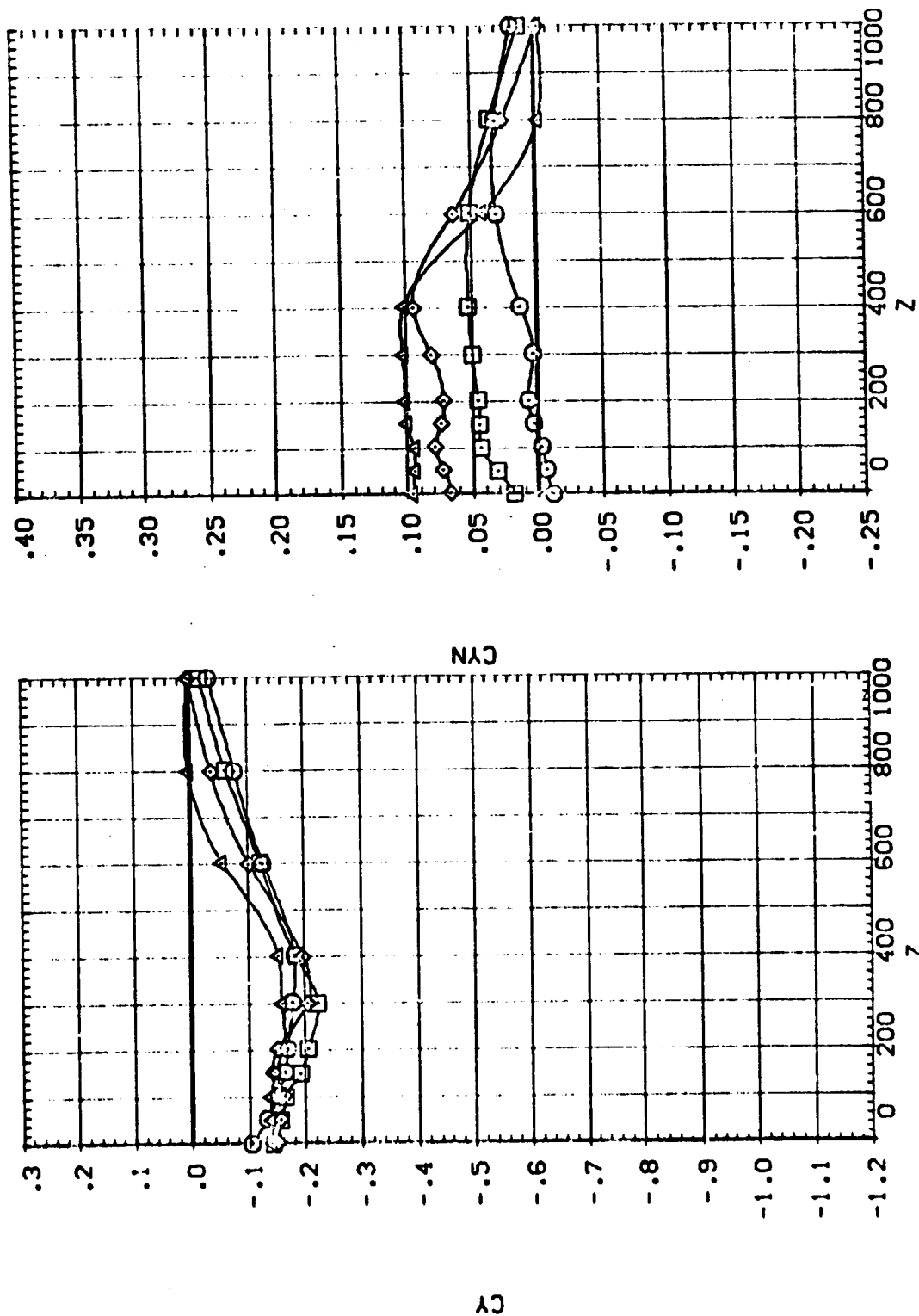


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ111)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | |
|---------|---|-------------------|---------|---------------------|----------|
| X | | MACH | 4.520 | PTOTAL | 58.000 |
| 300.440 | ○ | ALPHA | .000 | BETA | .000 |
| 600.370 | ◇ | DALPHA | .000 | DBETA | .000 |
| 900.570 | △ | Y | 200.000 | F _{NUMBER} | 1500.000 |

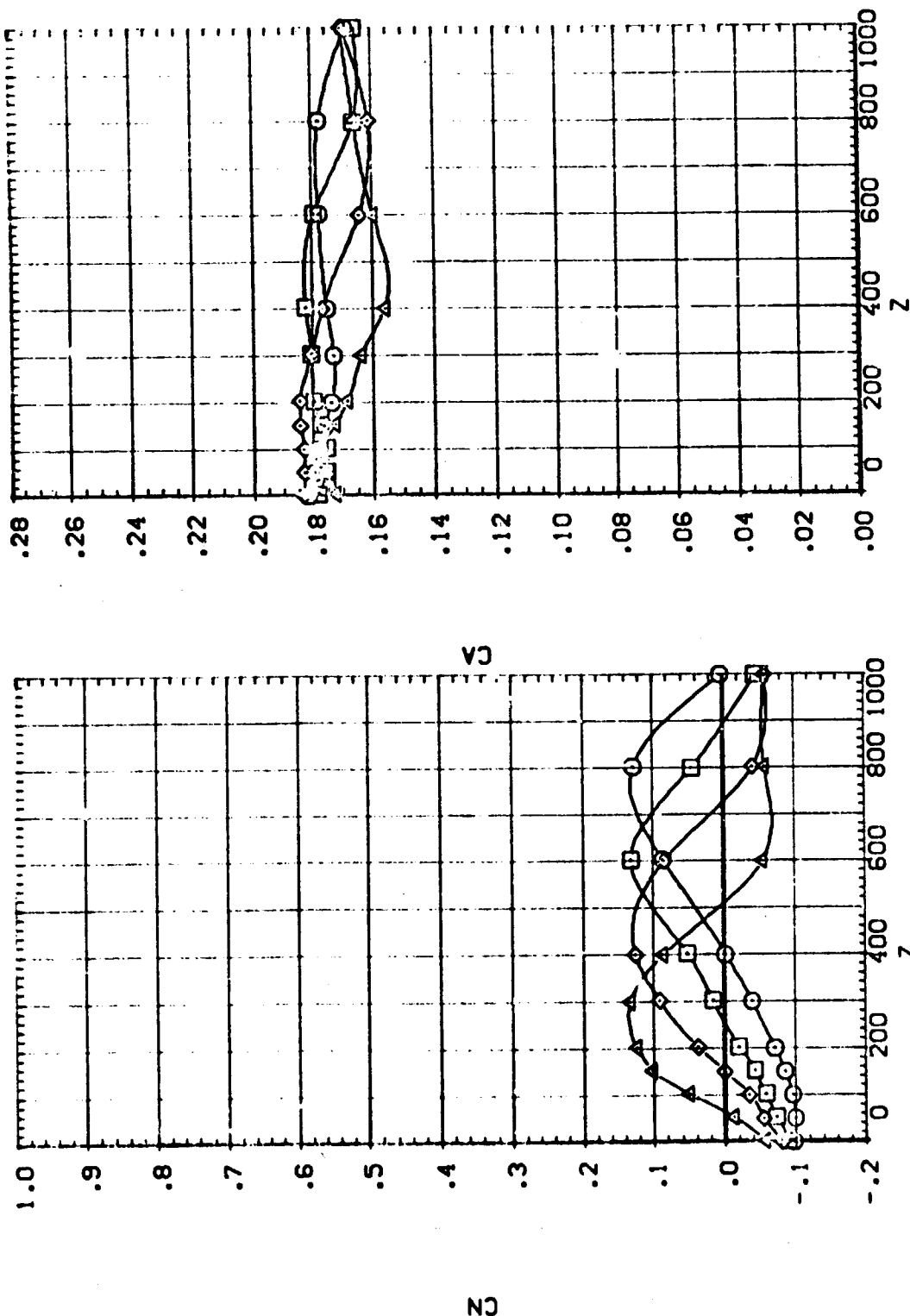


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SYMBOL X
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 .197 MACH 4.520 PTOTAL 58.000
 300.430 ALPHA .000 BETA .000
 600.450 DALPHA .000 PBETA .000
 900.620 Y 400.000 PCMBR 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

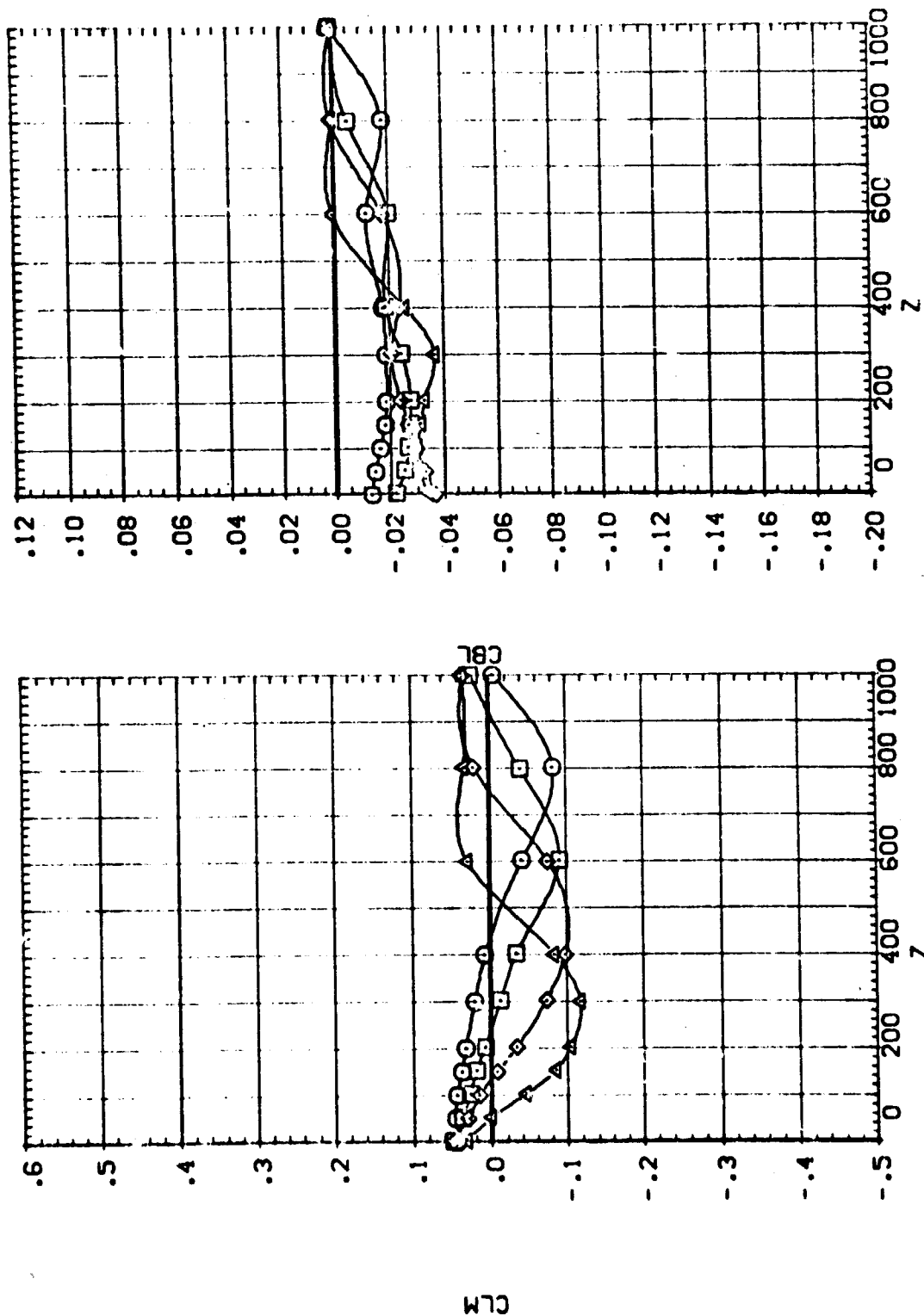


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ112)

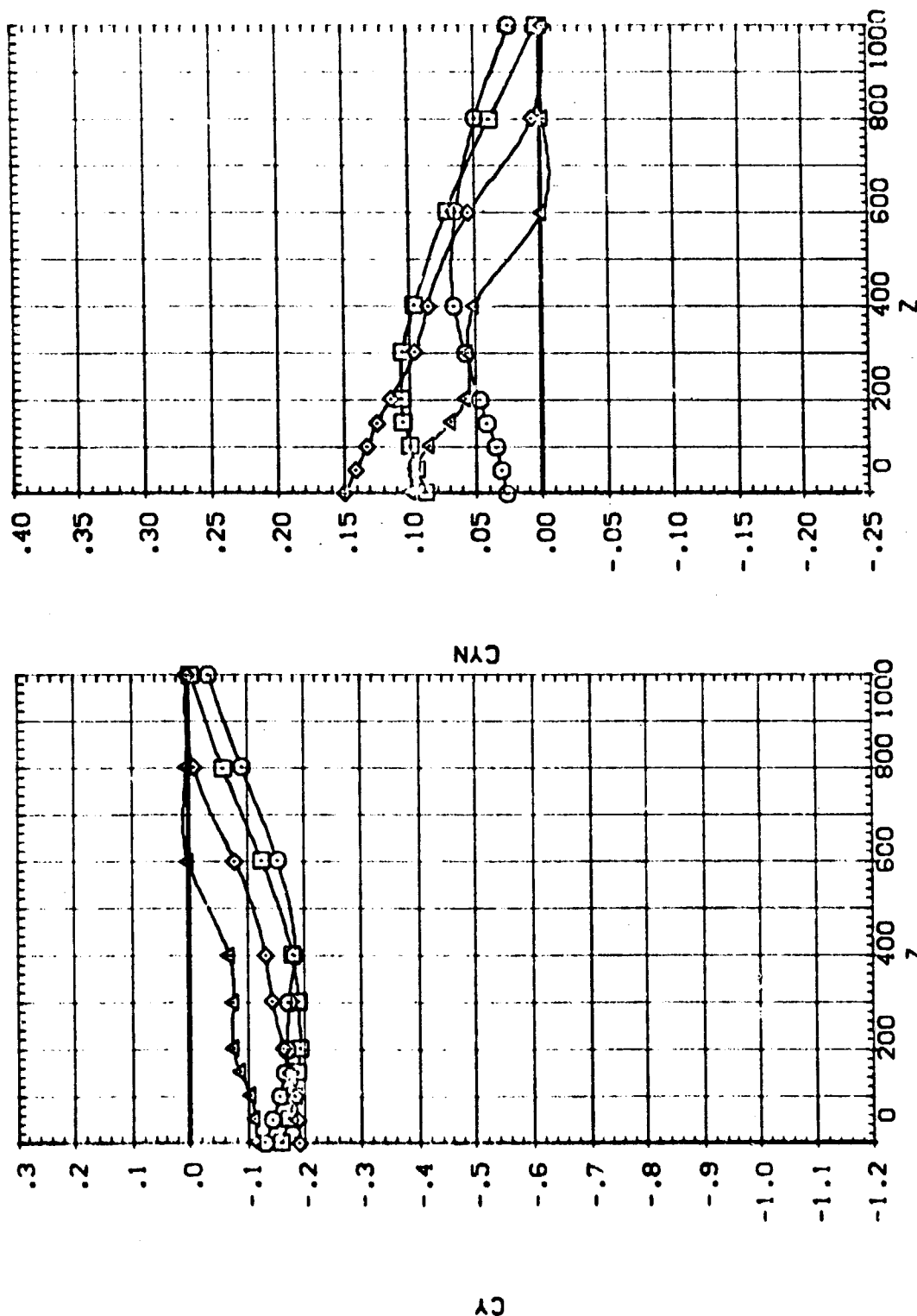
| SYMBOL | | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| ○ | .197 | MACH | 4.520 | PTOTAL | 58.300 |
| □ | 300.430 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.450 | DALPHA | .000 | DBETA | .000 |
| △ | 900.670 | Y | 400.000 | PCHBR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | |
|---------|------|-------------------|------|--------|--------|
| X | MACH | ALPHA | BETA | PC-MBR | PC-MBR |
| 300.430 | .197 | .000 | .000 | 58.000 | .000 |
| 600.450 | .197 | .000 | .000 | 58.000 | .000 |
| 900.620 | .197 | .000 | .000 | 58.000 | .000 |

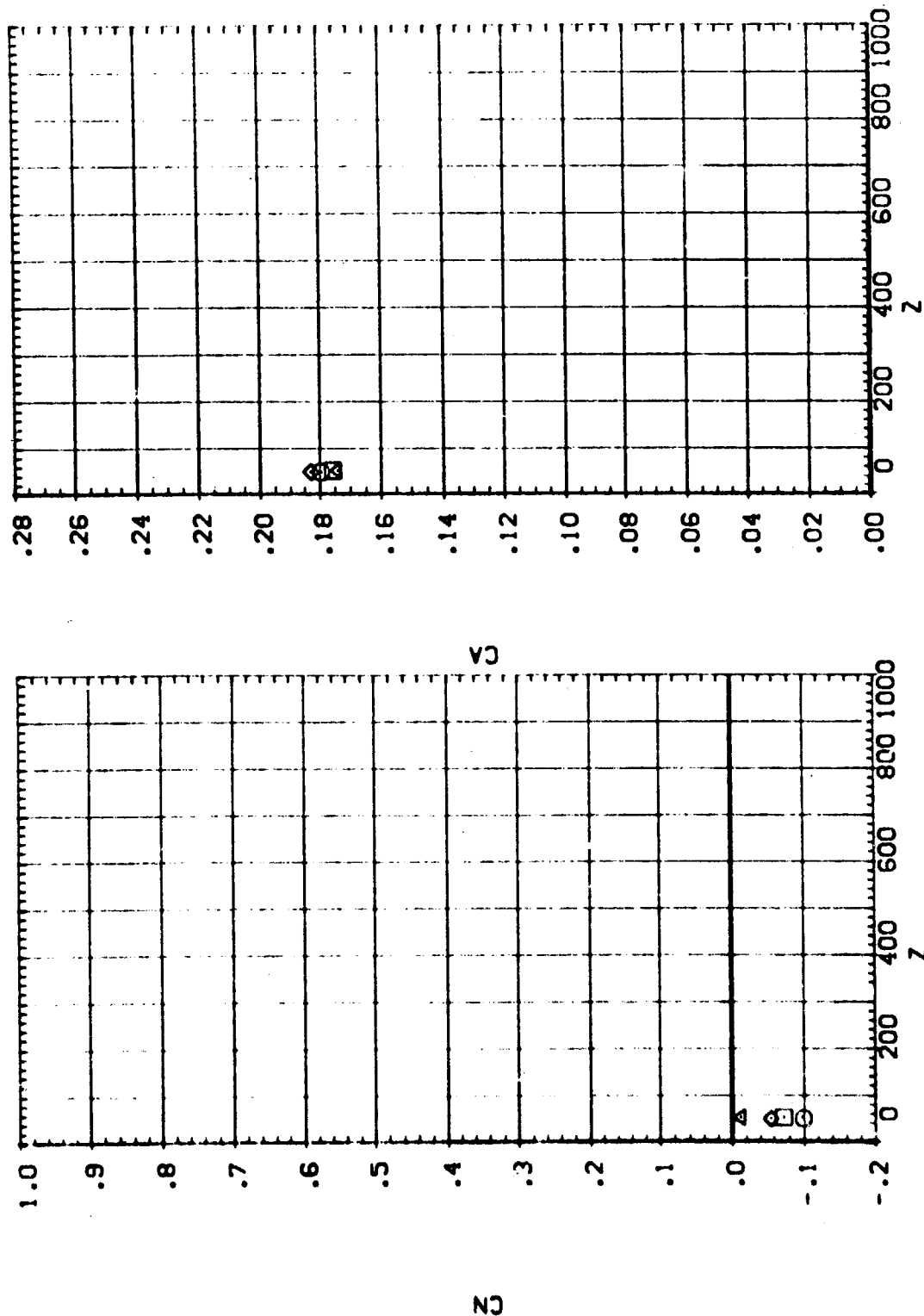


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ1113)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.520 | PITOT | 58.000 | |
| ○ | 330.370 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.410 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.640 | Y | 800.000 | PC-MGR | 1500.000 | |

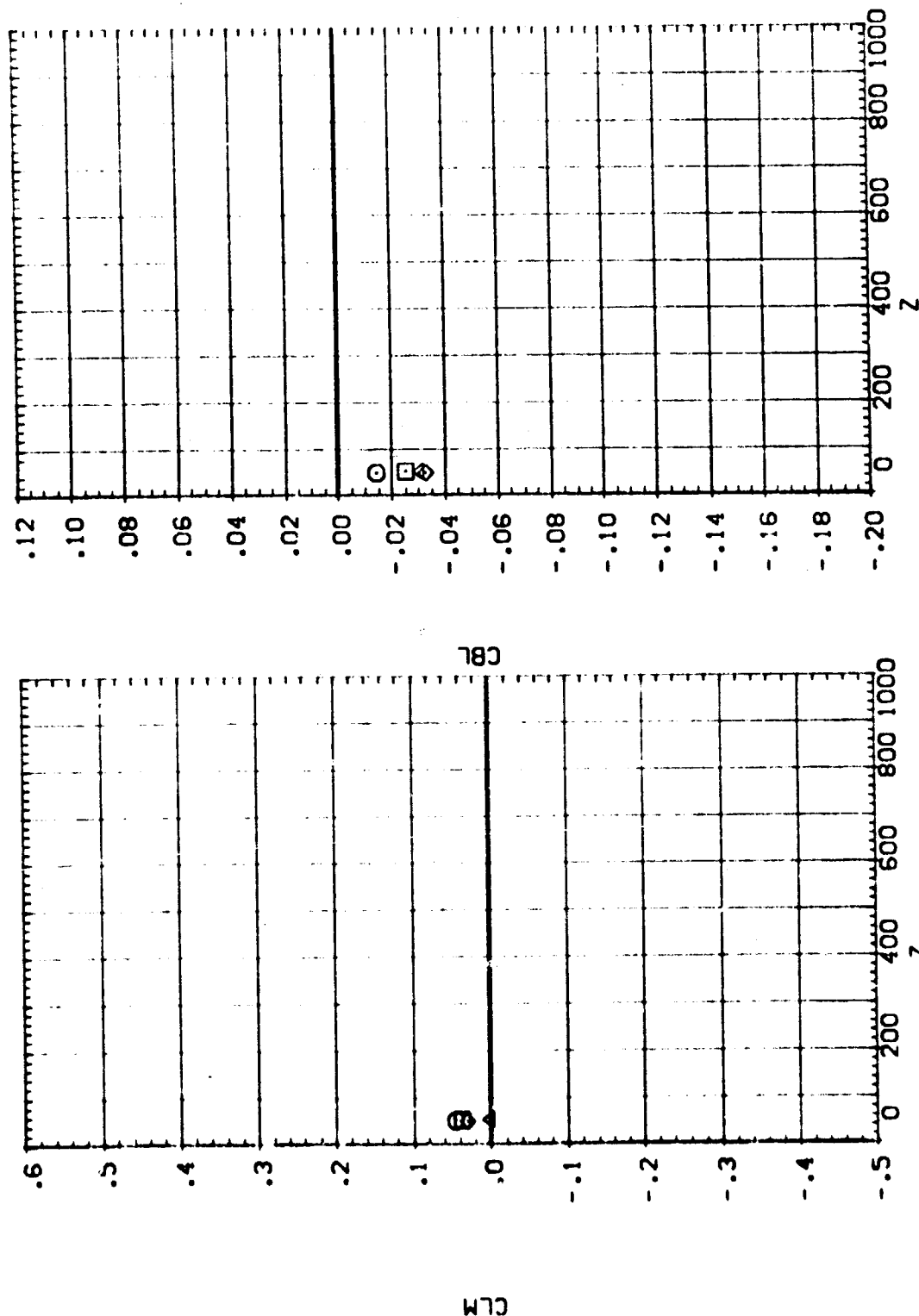


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ113)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | | |
|--------|---|-------------------|--------|---------|--------|----------|
| ○ | x | .133 | MACH | 4.520 | PTOTAL | 58.000 |
| □ | | 300.320 | ALPHA | .000 | BETA | .000 |
| ◇ | | 600.410 | DALPHA | .000 | DBETA | .000 |
| △ | | 900.640 | Y | 800.000 | PC-MBR | 1500.000 |

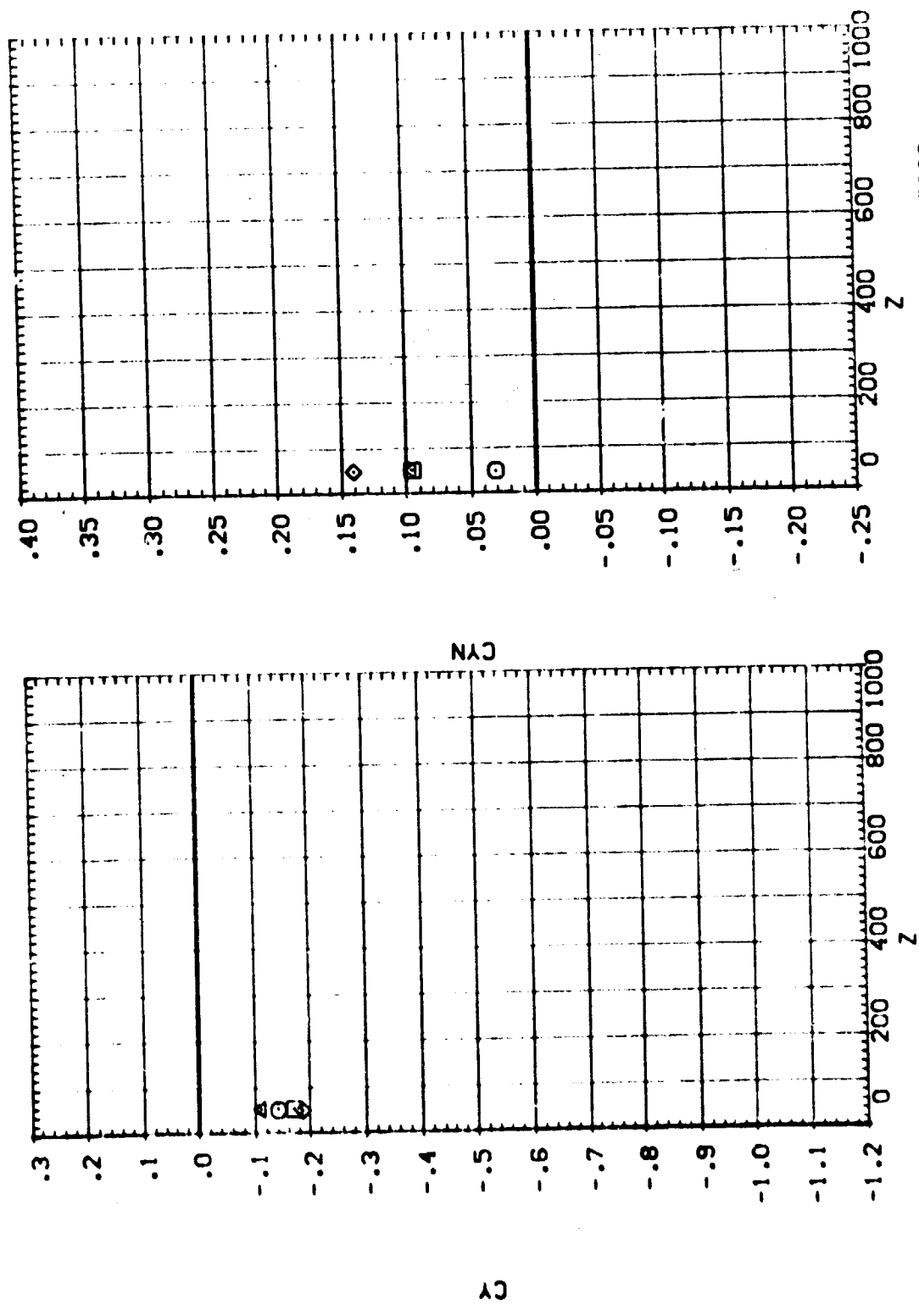


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

:A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ113)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

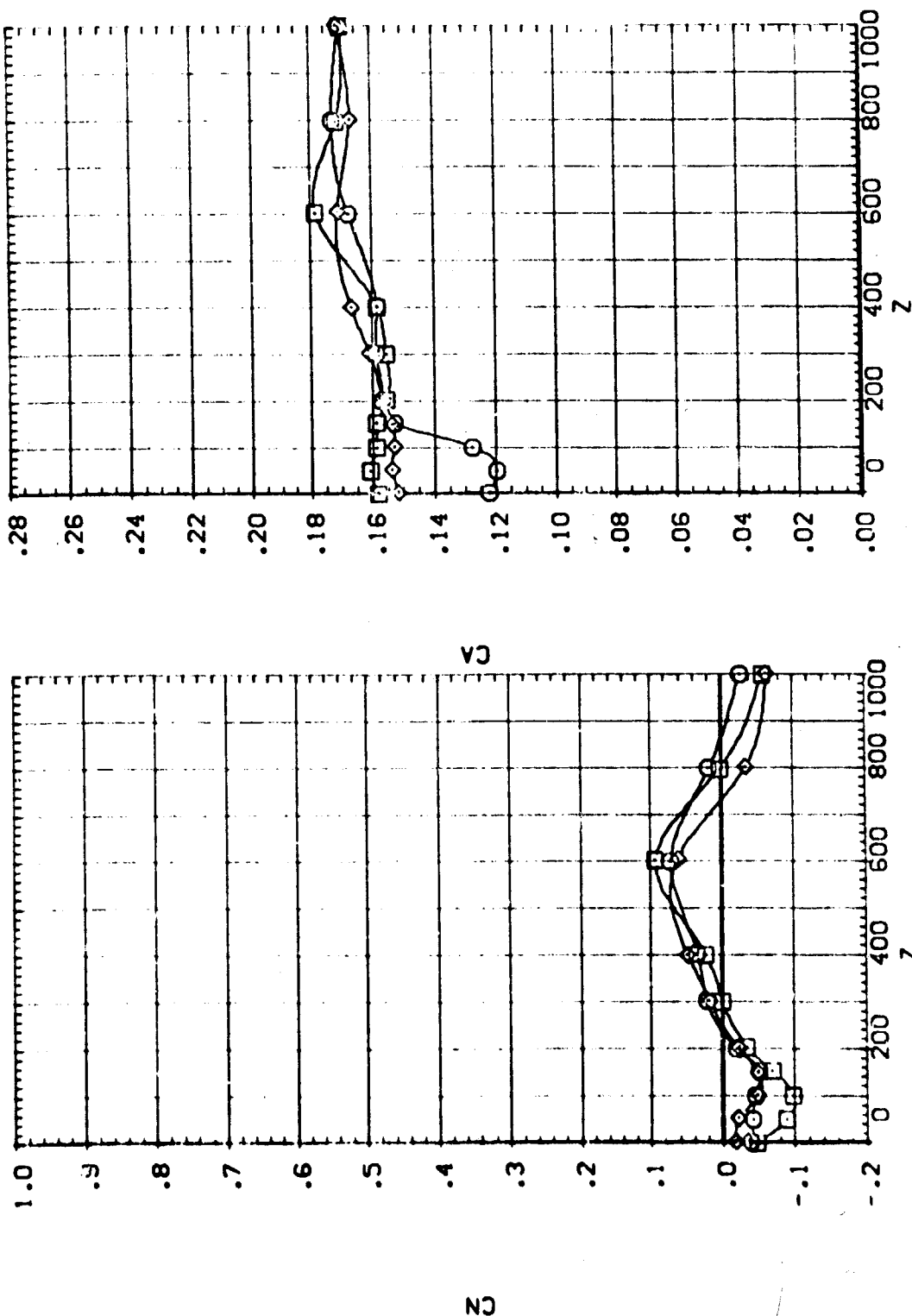
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|----------|
| | | MACH | 4.520 | P TOTAL | 58.000 |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.410 | DALPHA | .000 | DBETA | .000 |
| △ | 900.640 | Y | 800.000 | PC+PBR | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ114)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X MACH ALPHA DAUPHA V
 300.320 .219 4.530 PTOTAL 110.000
 600.470 .000 .000 BETA .000
 .000 .000 PC-MR 1500.000

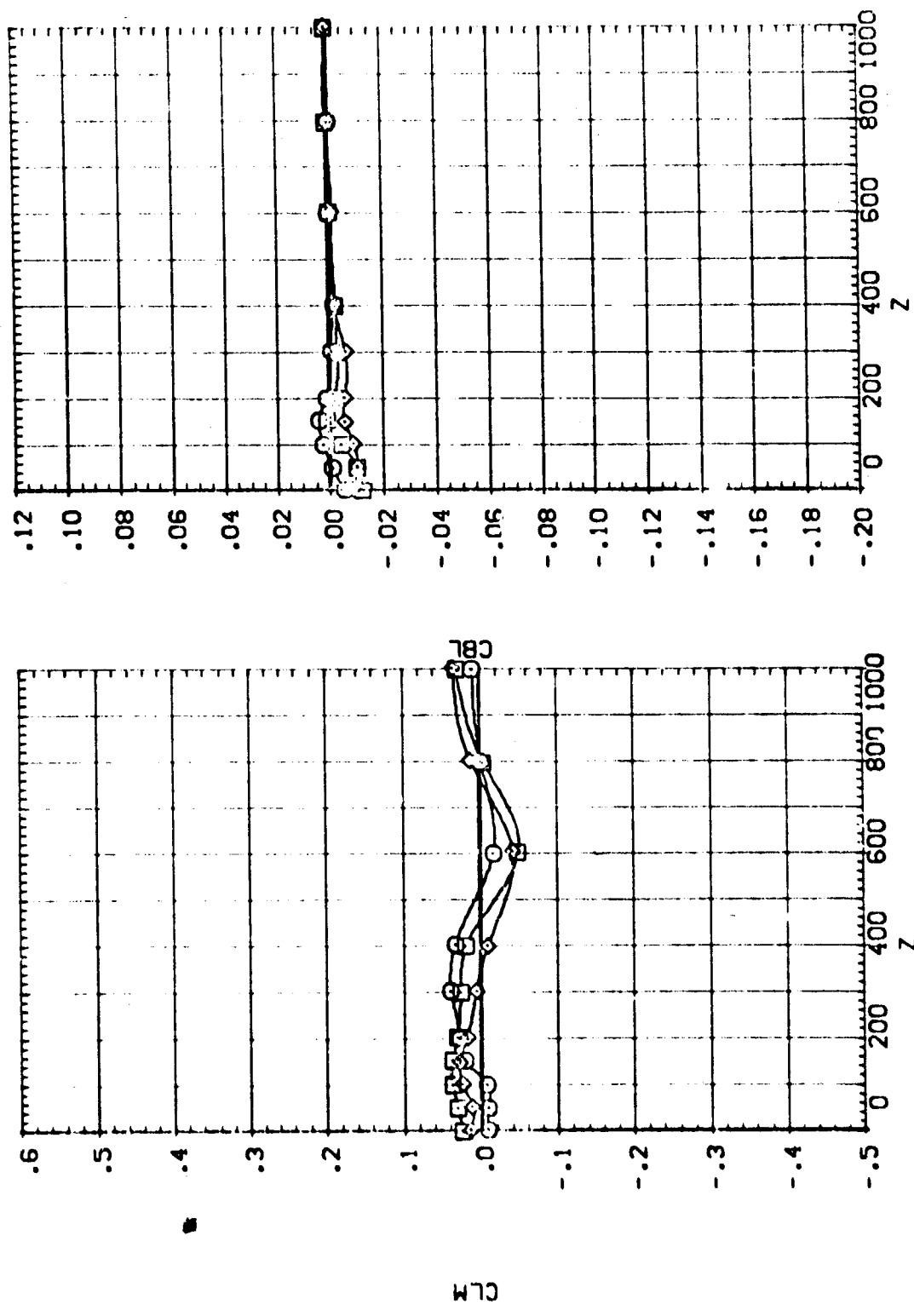


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ114)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

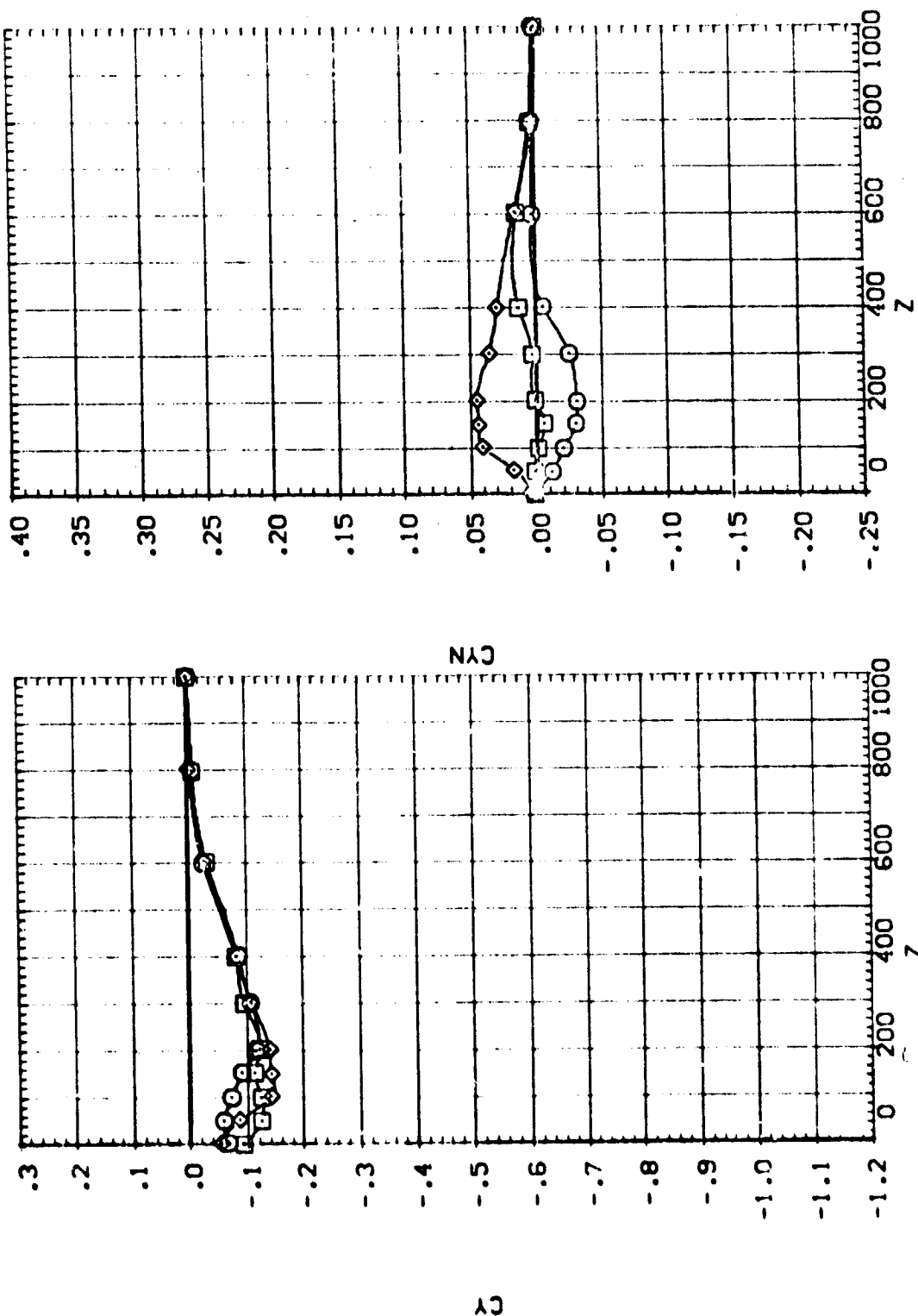
| SYMBOL | K | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|----------|
| | | MACH | PTOTAL | BETA | PCMBR |
| ○ | 300.320 | .219 | 4.530 | .000 | 110.000 |
| ◇ | 600.470 | ALPHA | .000 | .000 | .000 |
| | | ALPHA | .000 | .000 | 1500.000 |
| | | Y | | | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ114)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|---------|----------|
| ○ | .215 | MACH | 4.530 | P TOTAL | 110.000 |
| □ | 300.320 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.470 | DALPHA | .000 | DBETA | .000 |
| | | PC-MFR | .000 | PC-MFR | 1500.000 |

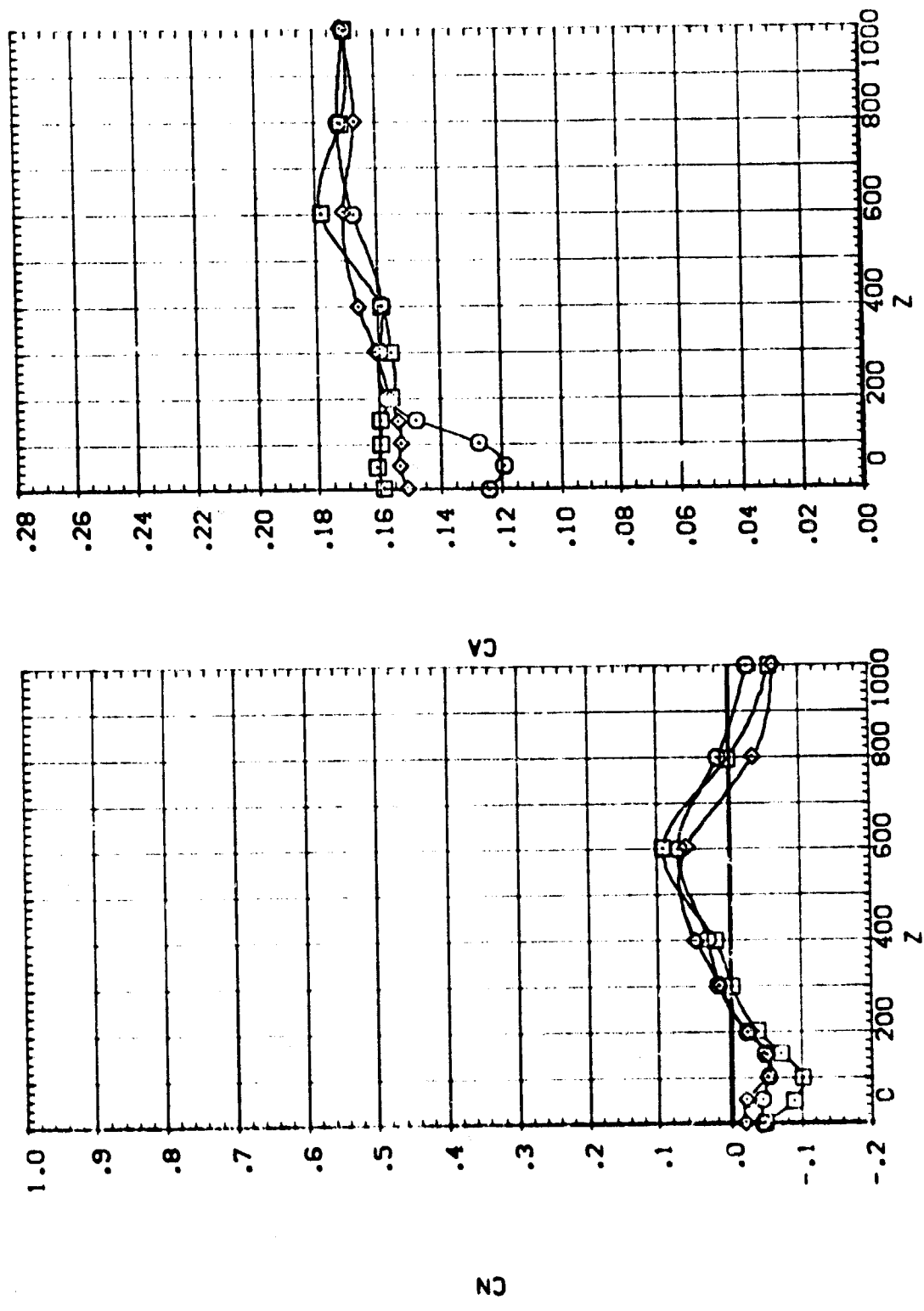


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ115)

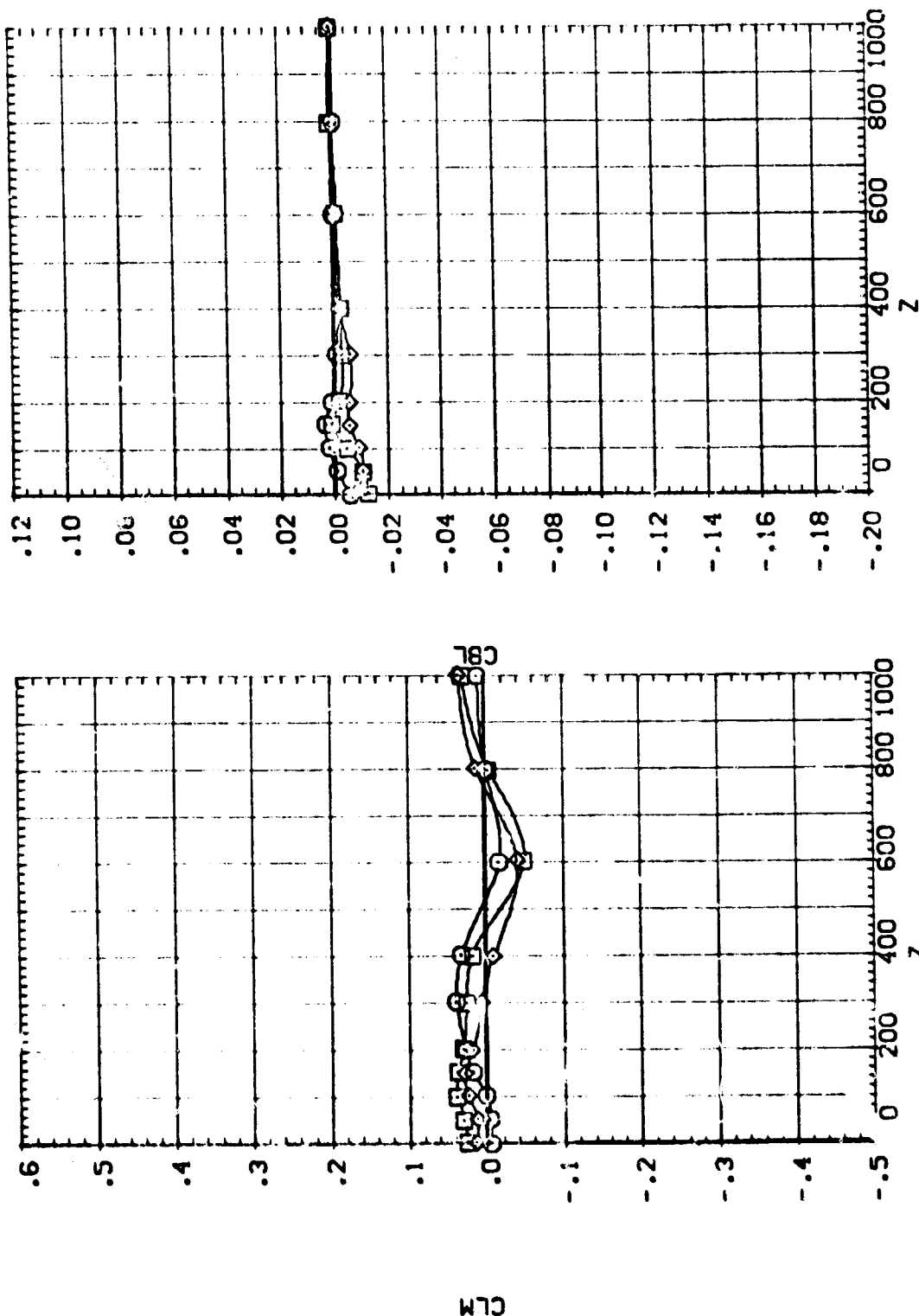
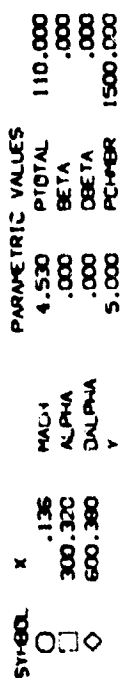
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|---------|----------|
| | | MACH | 4.530 | PIDOTAL | 110.000 |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.380 | DALPHA | .000 | DBETA | .000 |
| | | Y | 5.000 | PCHEER | 1500.000 |



TA13.588(S8) WITH PLUMES SEPARATING FROM 09110

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



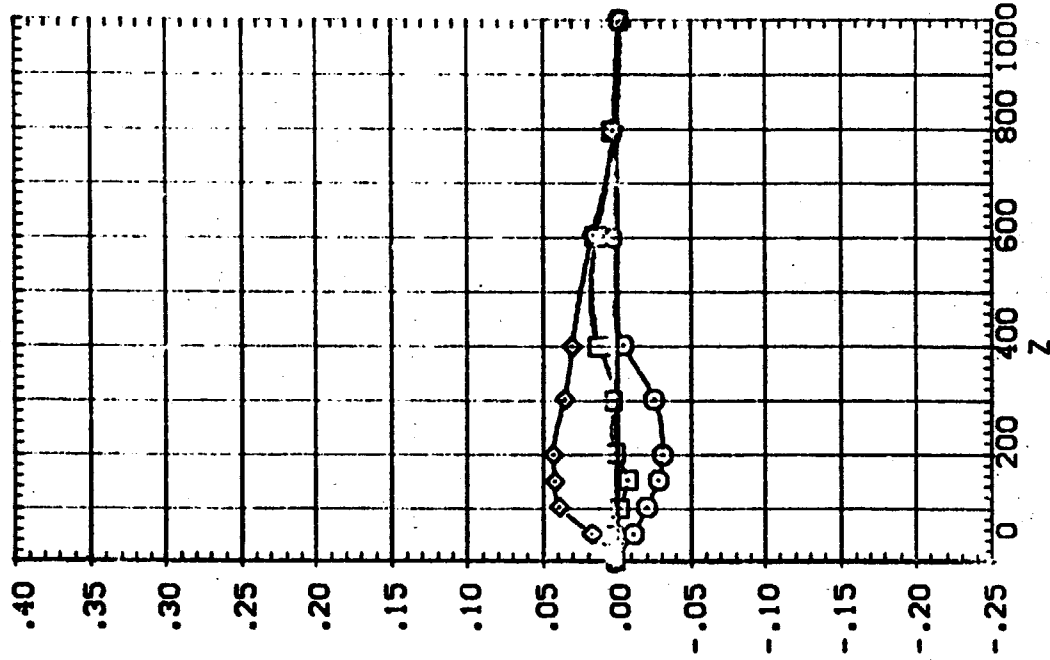
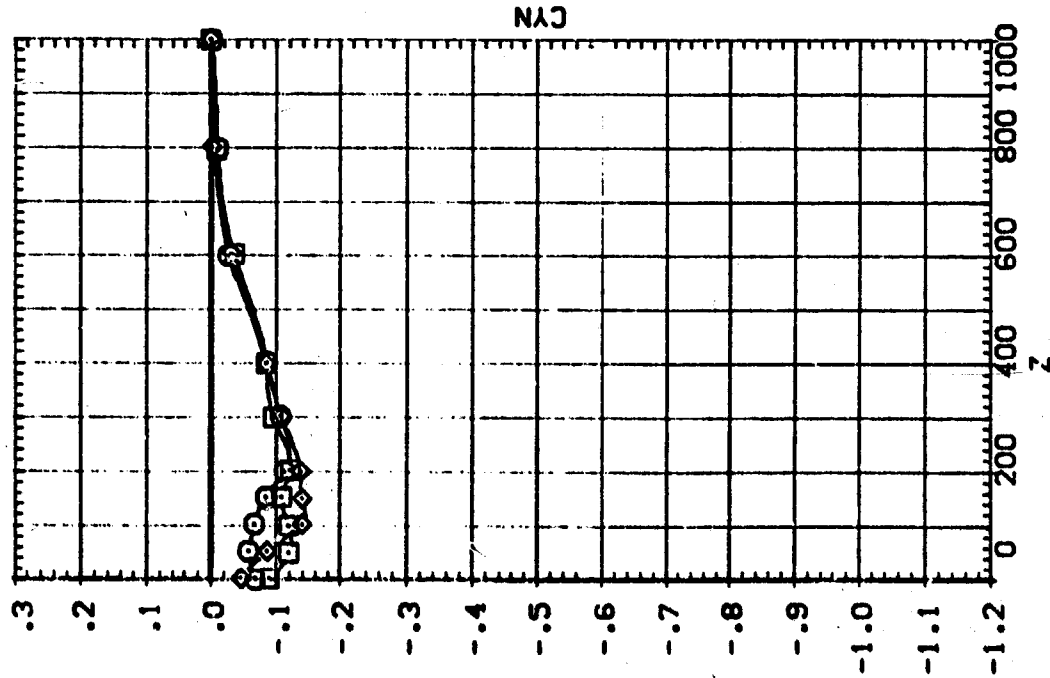
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH: PLUMES SEPARATING FROM 09T10 (RTJ115J)

SYMBOL
 ○ □ ◇

PARAMETRIC VALUES
 X .136 MACH 4.530 PTOTAL 110.000
 300.320 ALPHA .000 BETA .000
 600.380 DALPHA .000 DBETA .000
 Y 5.000 PC-MBR 1500.000

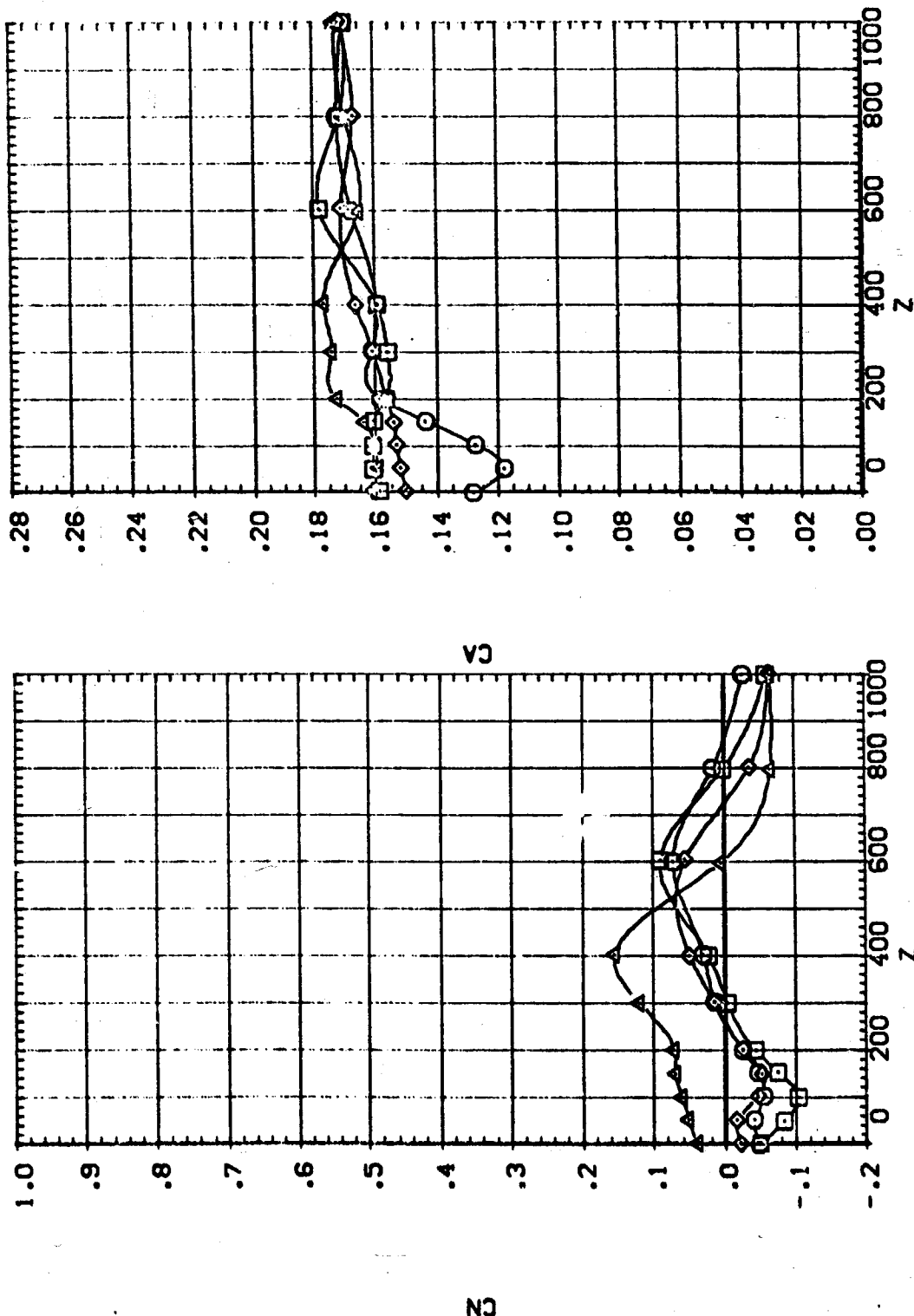
SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|------|-------|----------|
| | | MACH | PTOTAL | BETA | DBETA | PC-#BR |
| ○ | 300.400 | .176 | 4.530 | .000 | .000 | 110.000 |
| □ | 600.440 | .176 | 4.530 | .000 | .000 | 110.000 |
| ◇ | 900.920 | .176 | 4.530 | .000 | .000 | 110.000 |
| △ | 900.920 | .176 | 4.530 | .000 | .000 | 1500.000 |

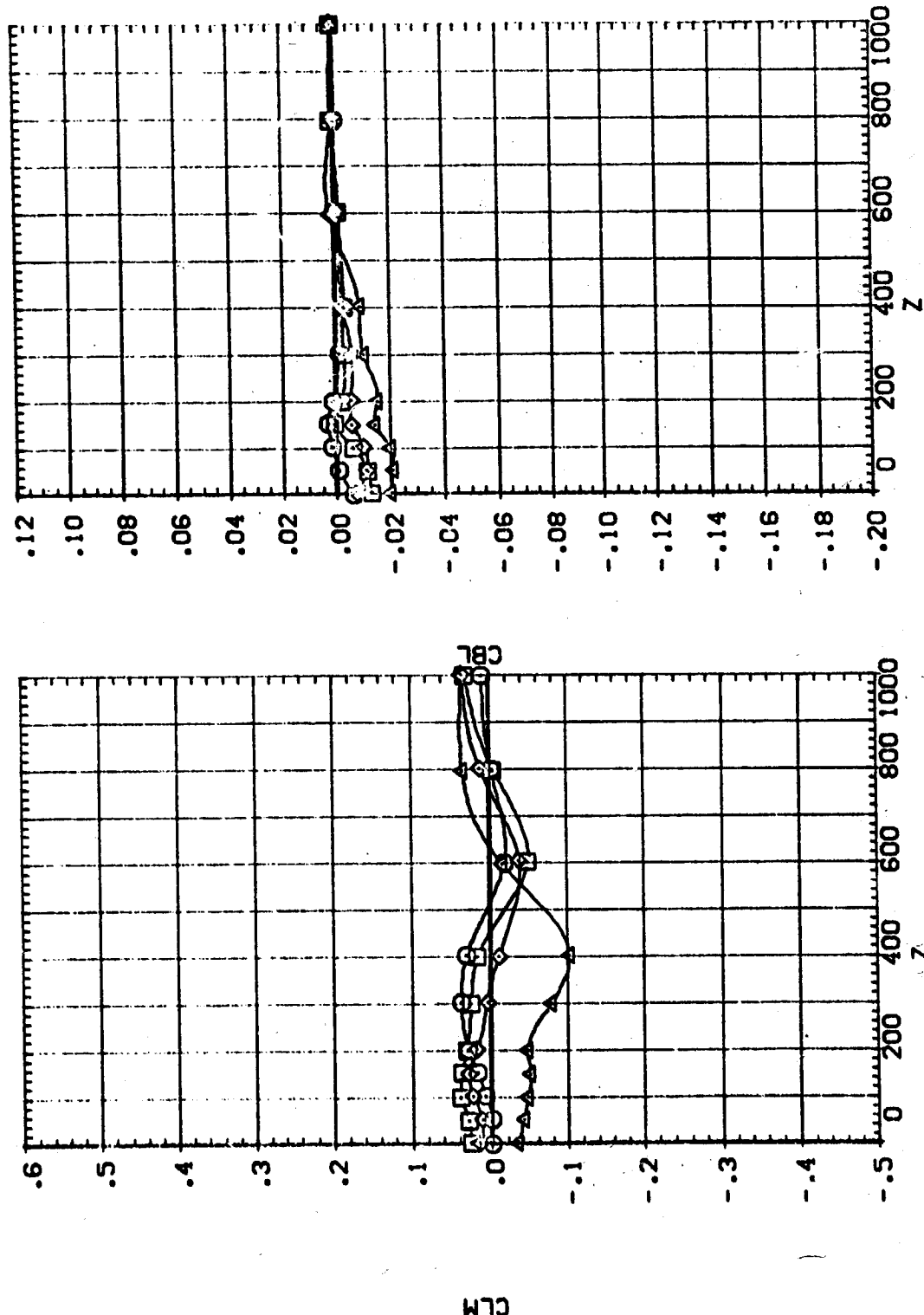


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ116)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

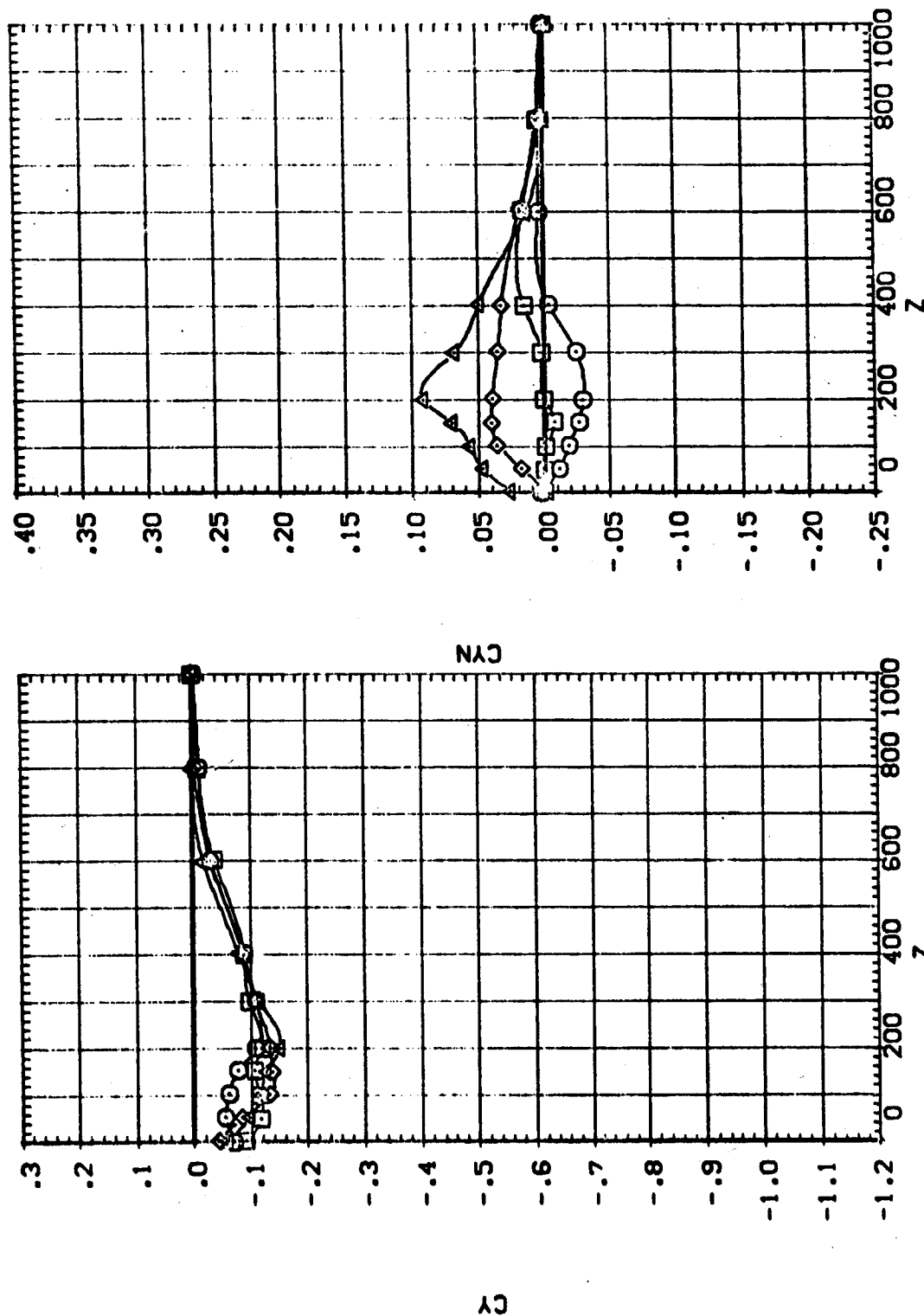
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|-------|
| | | MACH | P/TOTAL | BETA | DBETA |
| ○ | .176 | 4.530 | 110.000 | .000 | .000 |
| □ | 300.400 | .000 | .000 | .000 | .000 |
| ◇ | 600.440 | .000 | .000 | .000 | .000 |
| △ | 900.920 | 10.000 | 1500.000 | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | |
|--------|---------|--------|-------------------|----------|
| ○ | .176 | 4.530 | PTOTAL | 110.000 |
| □ | 300.400 | .000 | BETA | .000 |
| ◇ | 600.440 | .000 | DBETA | .000 |
| △ | 900.920 | 10.000 | PC+PR | 1500.000 |

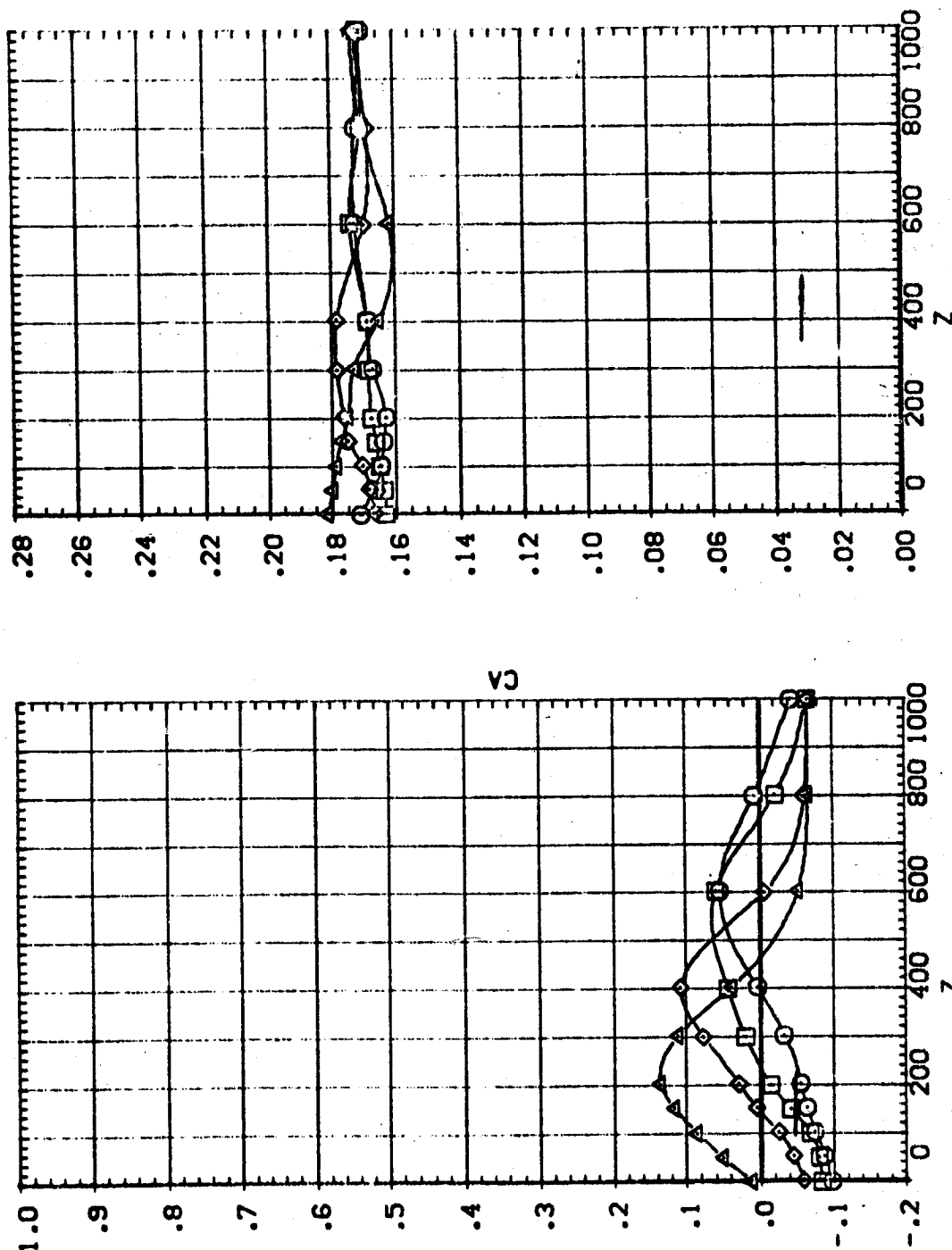


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ117)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.530 | PTOTAL | 110.000 | |
| □ | 300.420 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.530 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.650 | Y | 200.000 | PC+PR | 1500.000 | |

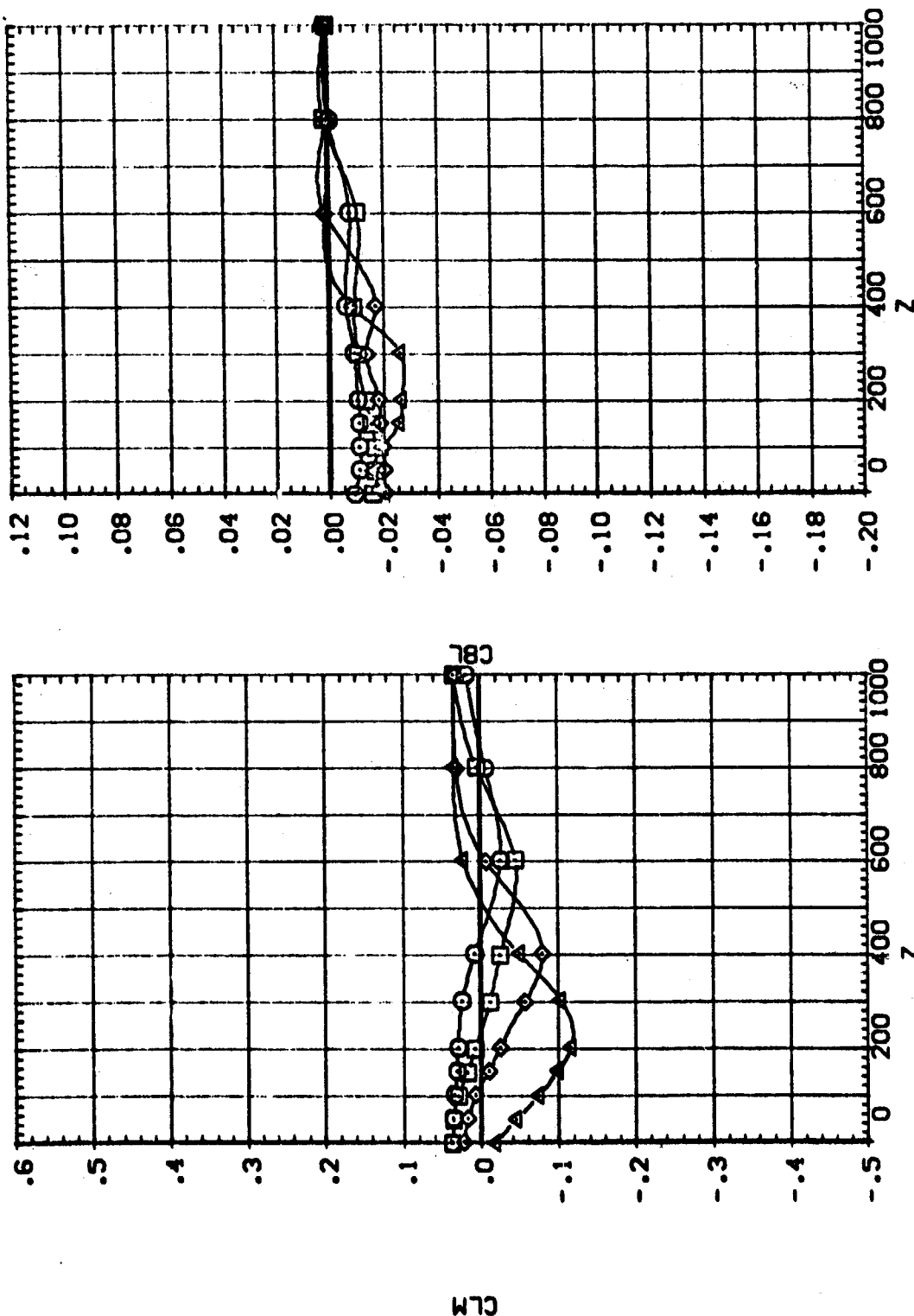


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X
 ○ 300.420
 □ 600.530
 ◇ 900.650
 △ 126

PARAMETRIC VALUES
 4.530 TOTAL 110.000
 .000 BETA .000
 .000 DBETA .000
 200.000 PC#8R 1500.000

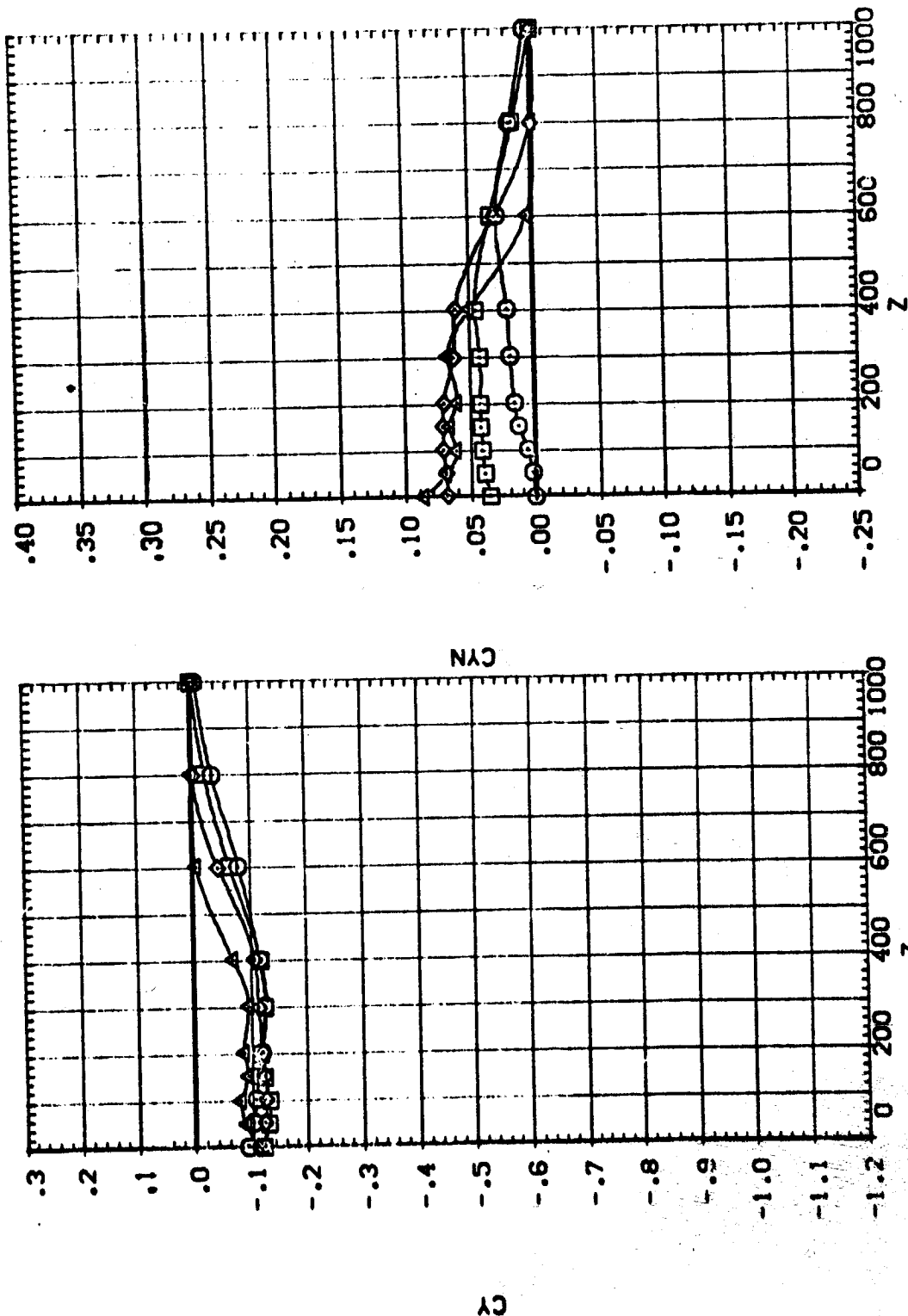


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ117)

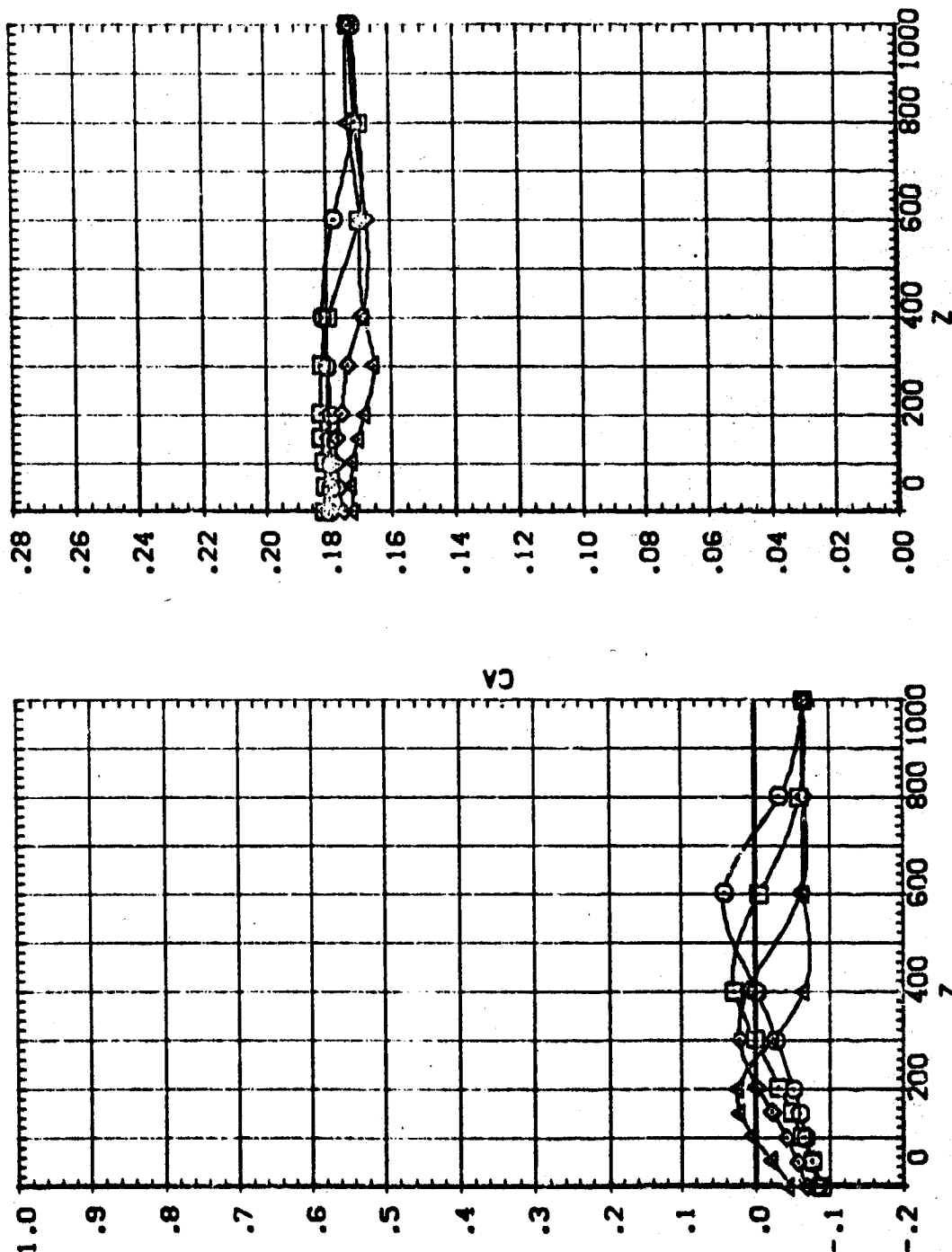
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|--------|
| | | MACH | PTOTAL | BETA | PO-MBR |
| ○ | .125 | 4.530 | 110.000 | .000 | |
| □ | 300.420 | .000 | .000 | .000 | |
| ◇ | 600.530 | .000 | .000 | .000 | |
| △ | 900.650 | 200.000 | 1500.000 | | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X .232 MACH 4.530 PTOIAL 110.000
300.520 ALPHA .000 BETA .000
600.460 DALPHA .000 DBETA .000
900.620 V 400.000 PC-MER 1500.000

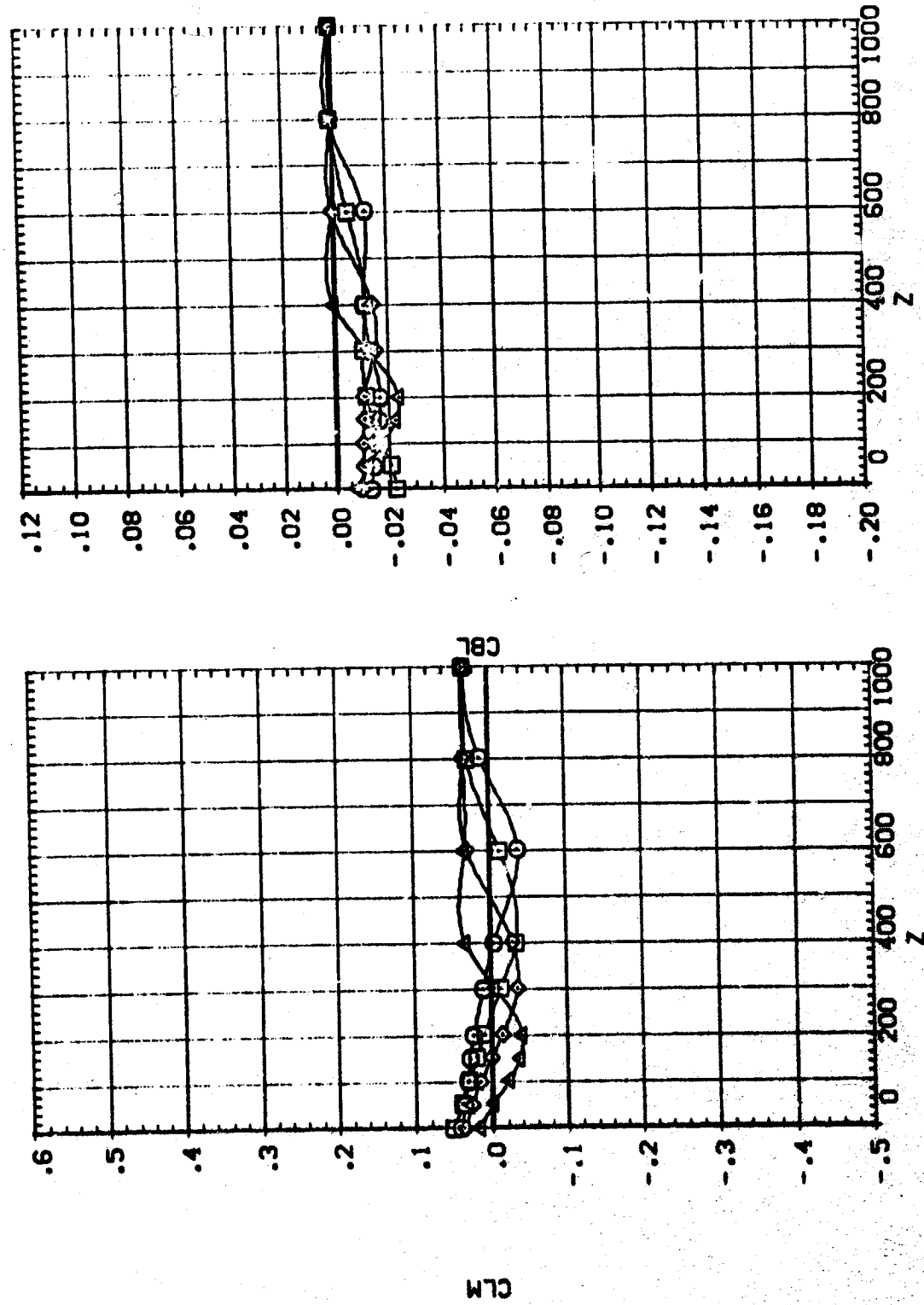


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ118)

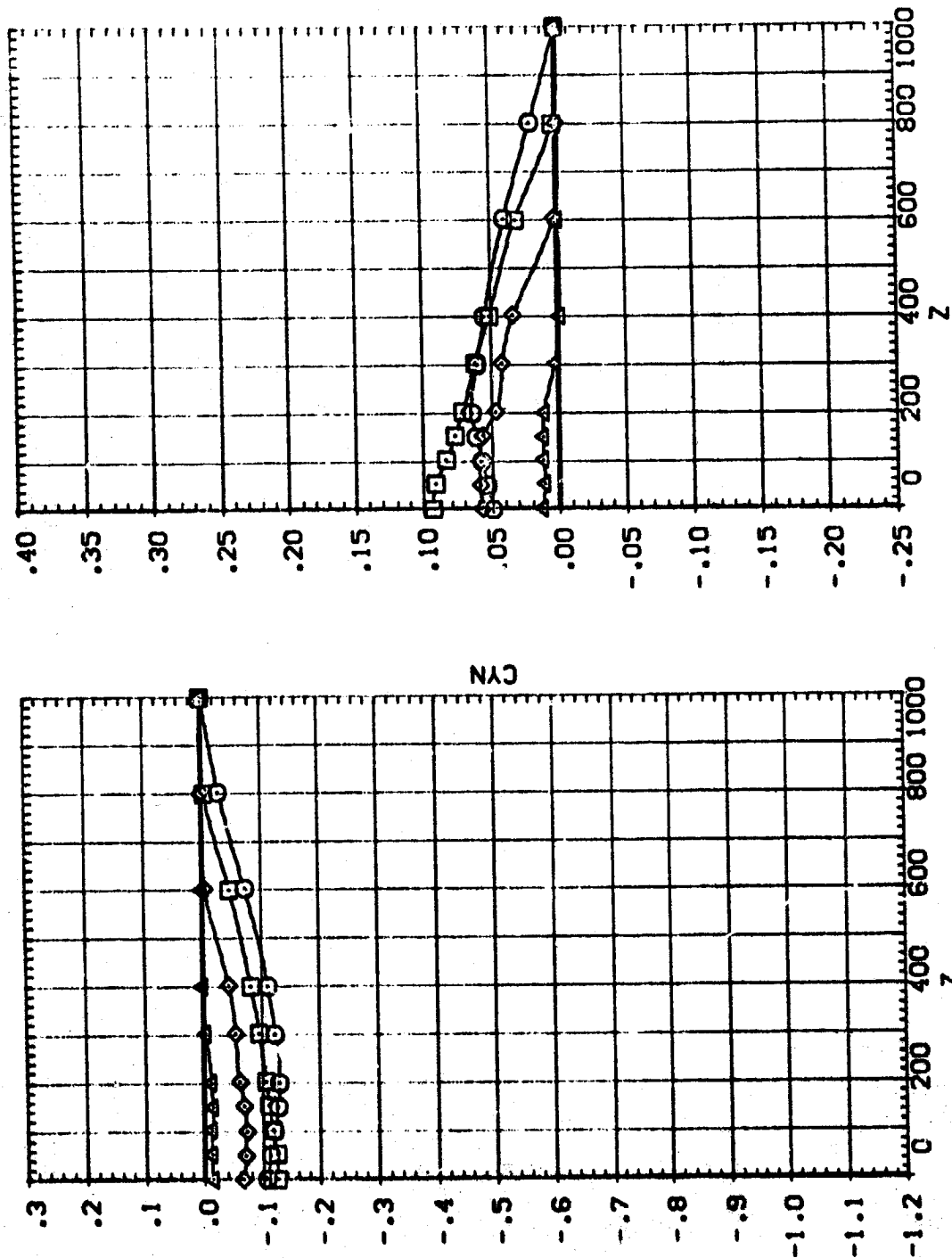
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|--------|
| | | MACH | PTOTAL | BETA | PC-HSR |
| ○ | .232 | 4.530 | 110.000 | .000 | |
| □ | 300.520 | .000 | .000 | .000 | |
| ◇ | 600.460 | .000 | .000 | .000 | |
| △ | 900.320 | 400.000 | 1500.000 | | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--------|
| | | MACH | PTOTAL | BETA | DBETA | PC-MER |
| □ | .232 | 4.530 | 110.000 | .000 | .000 | |
| ◇ | 300.520 | .000 | .000 | .000 | .000 | |
| △ | 600.460 | .000 | .000 | .000 | .000 | |
| | 900.620 | Y | 400.000 | PC-MER | 1500.000 | |



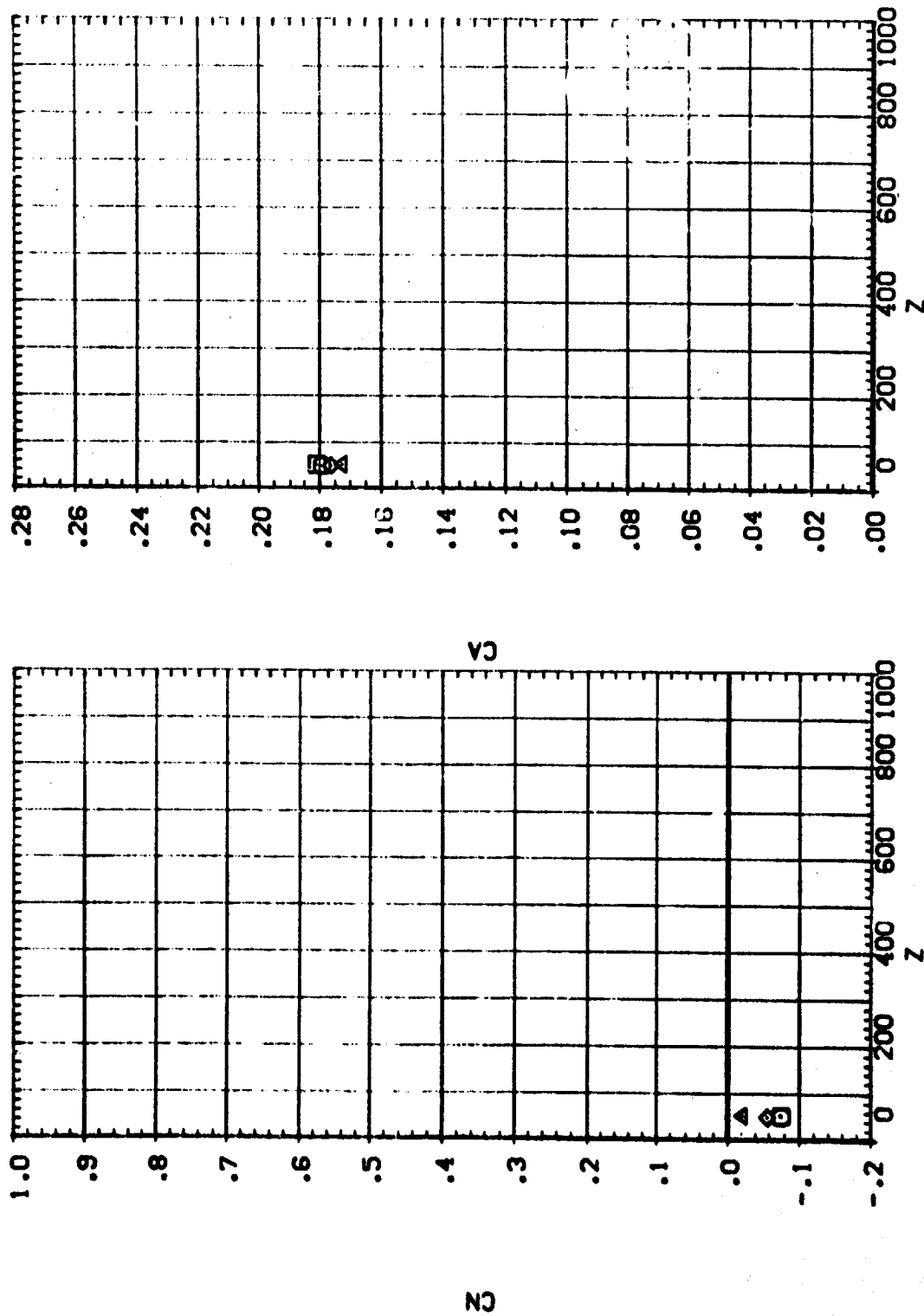
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ119)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X
 ○ 300.340
 □ 600.550
 ◇ 900.750

PARAMETRIC VALUES
 MACH 4.530
 ALPHA 110.000
 DALPHA .000
 Y .000
 DBETA .000
 PCWBR 800.000
 1500.000



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

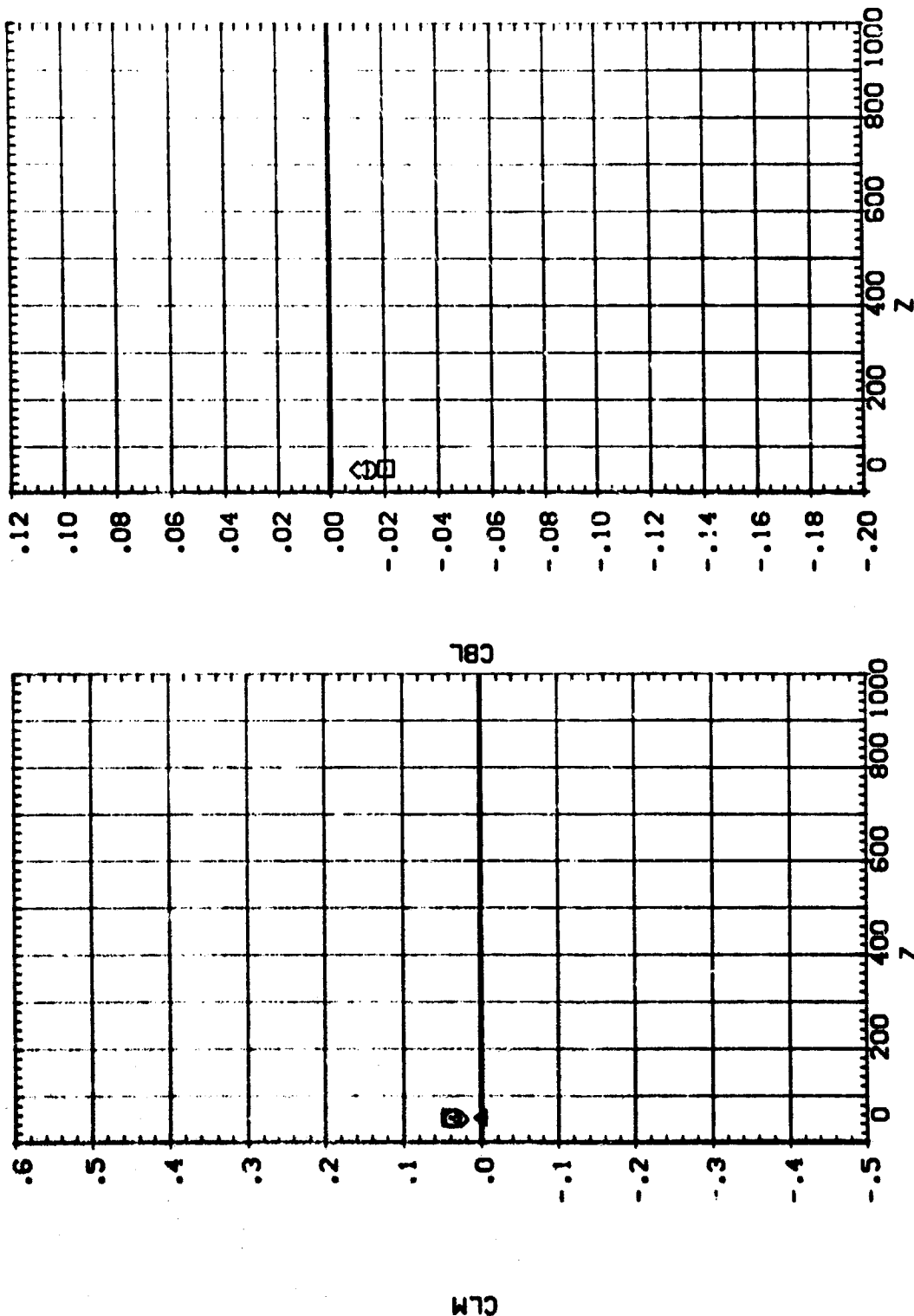
IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ119)

SYMBOL

○ □ ◇ △

PARAMETRIC VALUES
 MACH 4.530 PTOTAL 110.000
 ALPHA .000 BETA .000
 ALPHA .000 DBETA .000
 Y 800.000 POWER 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



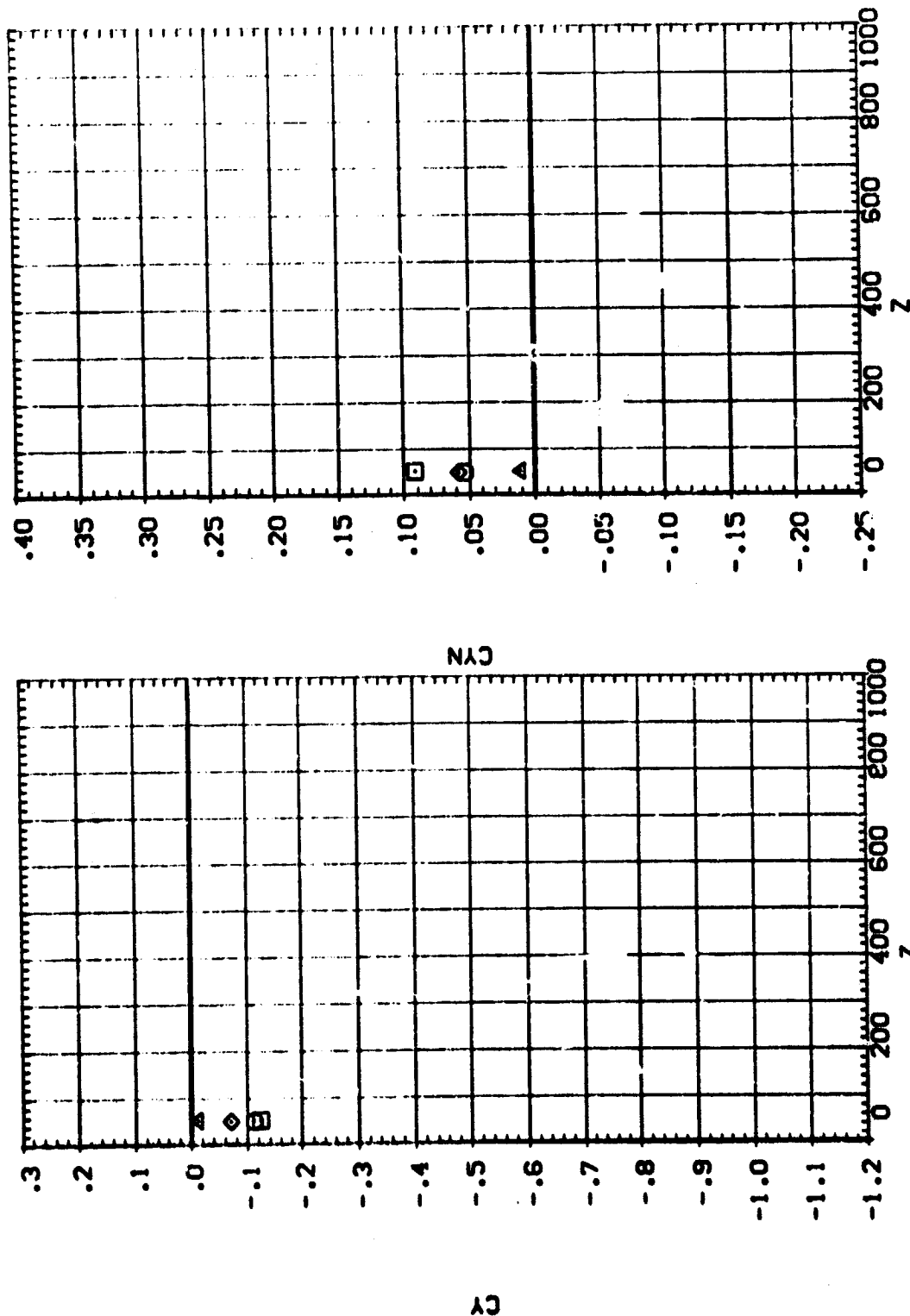
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

PAGE 1132

IA13.GR0(SR) WITH PLUMES SEPARATING FROM 09T10 (RTJ119)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

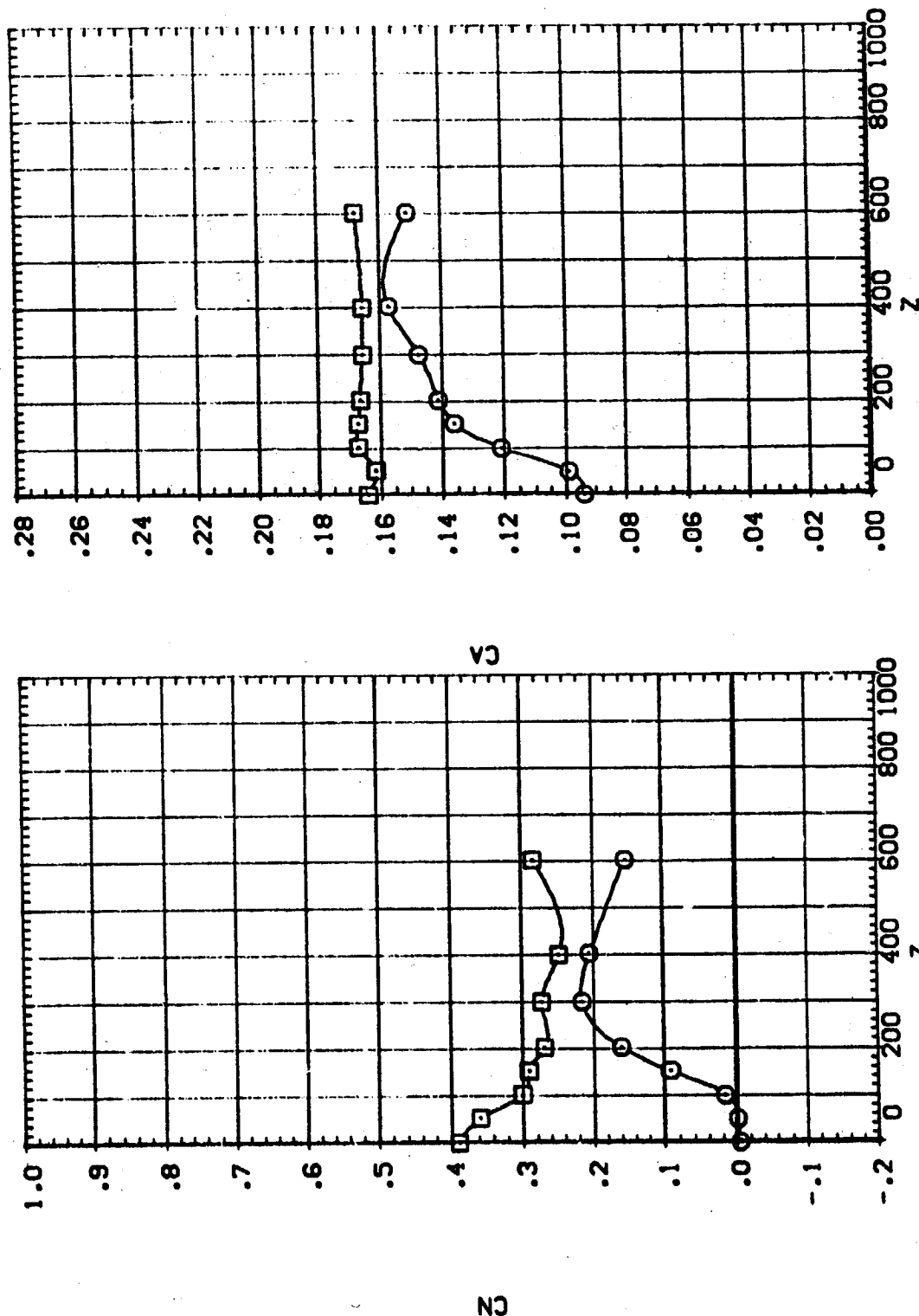
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | .280 | ALPHA | .000 | BETA | .000 |
| □ | 300.340 | DALPHA | .000 | DBETA | .000 |
| ◇ | 600.550 | Y | 800.000 | PO+PR | 1500.000 |
| △ | 900.750 | | | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH TOTAL 28.900
900.750 .314 4.510 PTOTAL .000
ALPHA .000 BETA .000
DALPHA 5.000 DBETA .000
Y POWER 1500.000

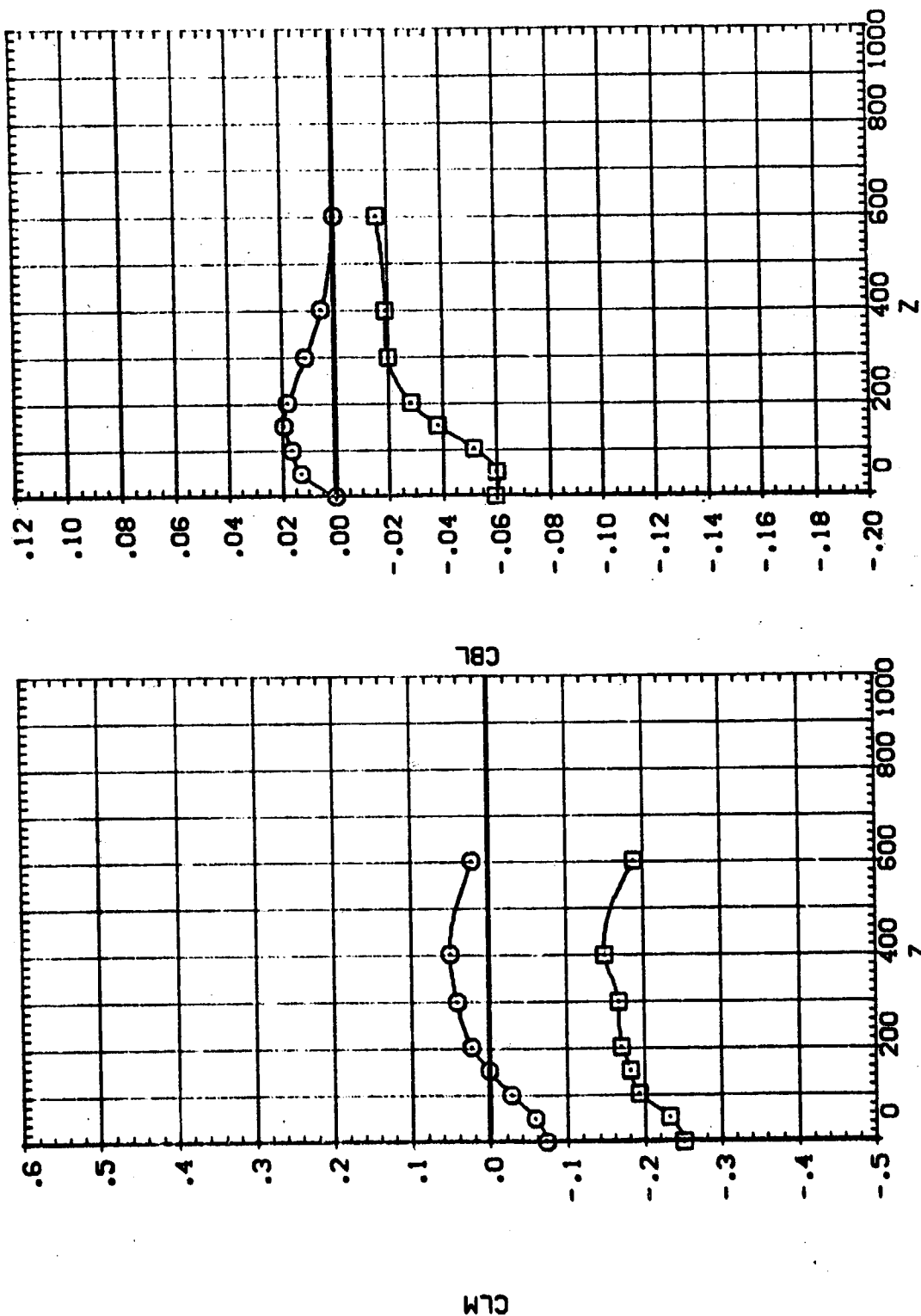


EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ158)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

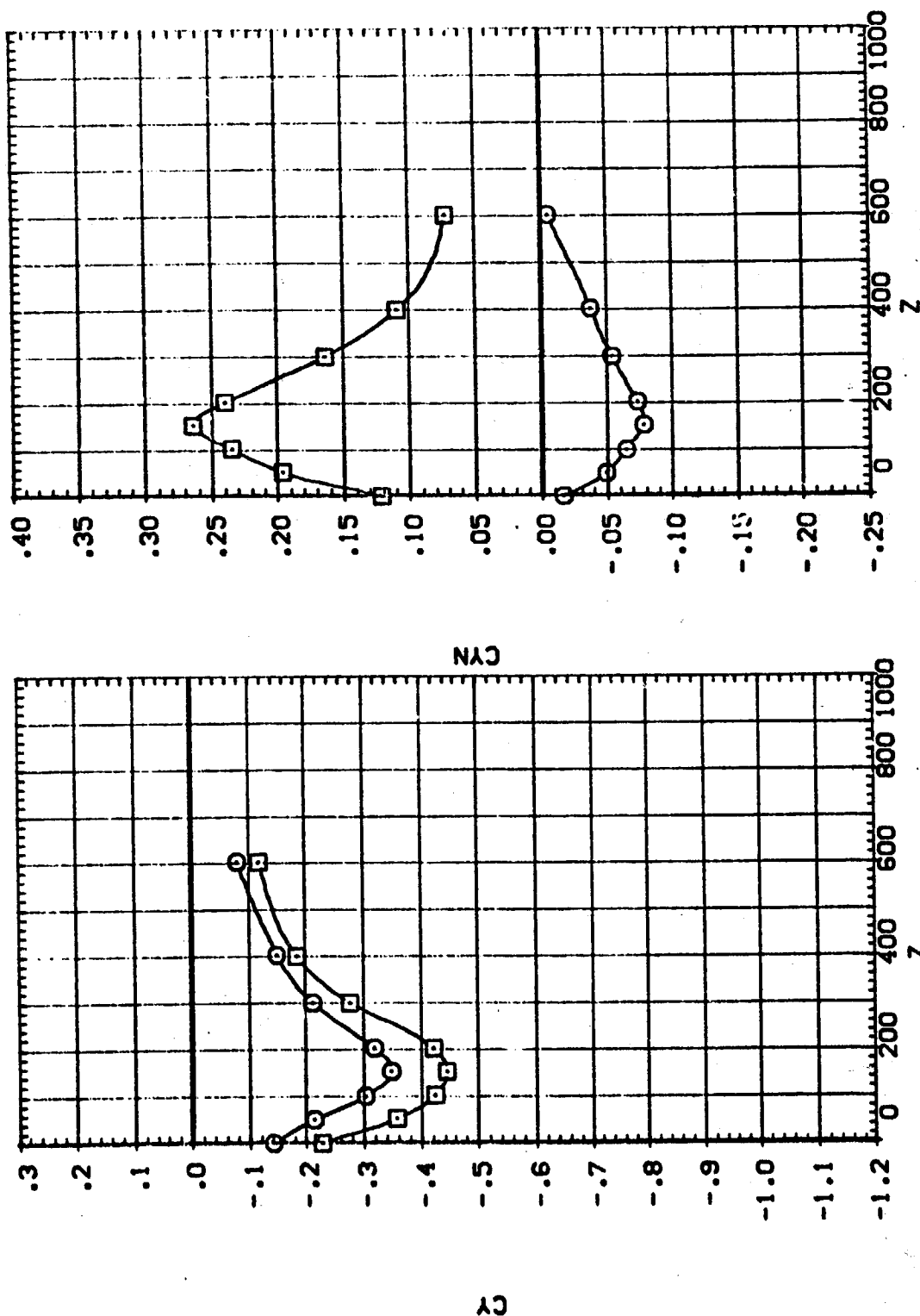
STR80L X .314 MACH 4.510 PTOTAL 28.900
900.750 ALPHA .000 BETA .000
DALPHA 5.000 DBETA .000
Y PC-HBR 1500.000



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATA'S

SYMBOL X MACH PARAMETRIC VALUES
 800.750 .314 4.510 PTOTAL 28.900
 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA .000
 Y POWER 1500.000

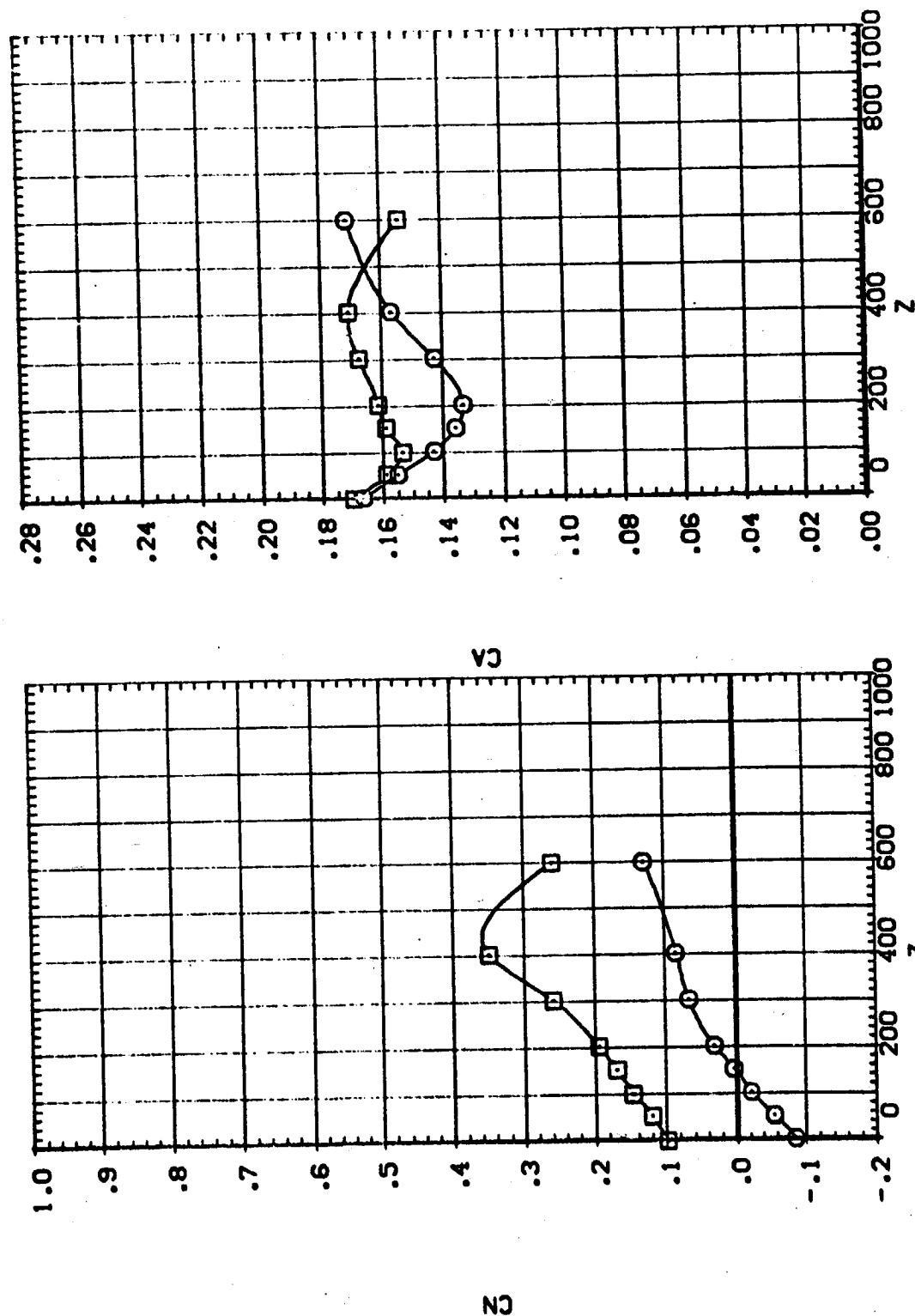


EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ159)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

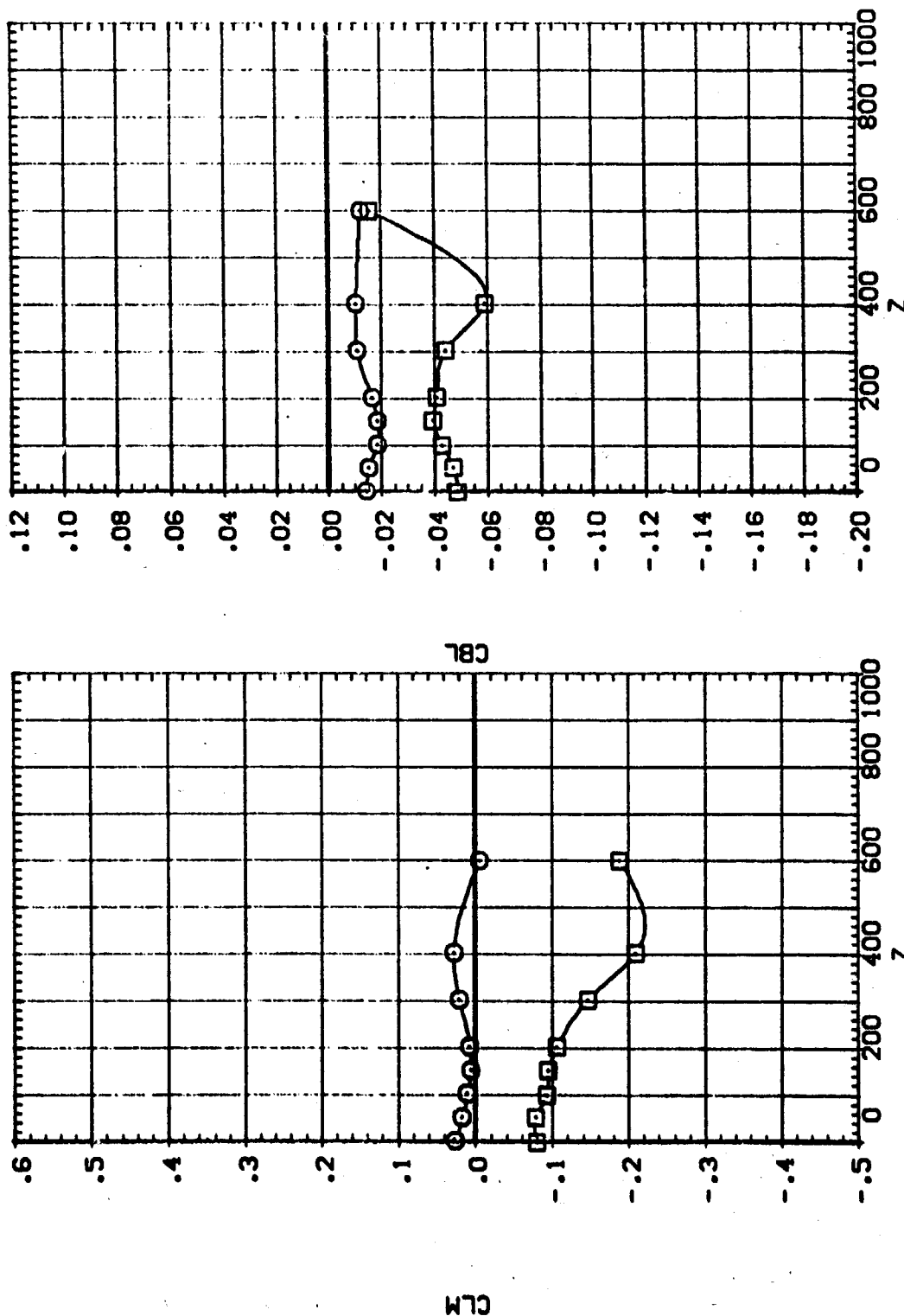
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | PTOTAL | 28.500 | |
| ○ | 500.700 | ALPHA | .000 | BETA | .000 | |
| □ | | DALPHA | 5.000 | DBETA | .000 | |
| | | Y | 200.000 | PCHBR | 1500.000 | |



SYMBOL
☐ ☐

X .259 MACH 4.510 PTOTAL 20.900
 900.700 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA .000
 Y 200.000 POWER 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

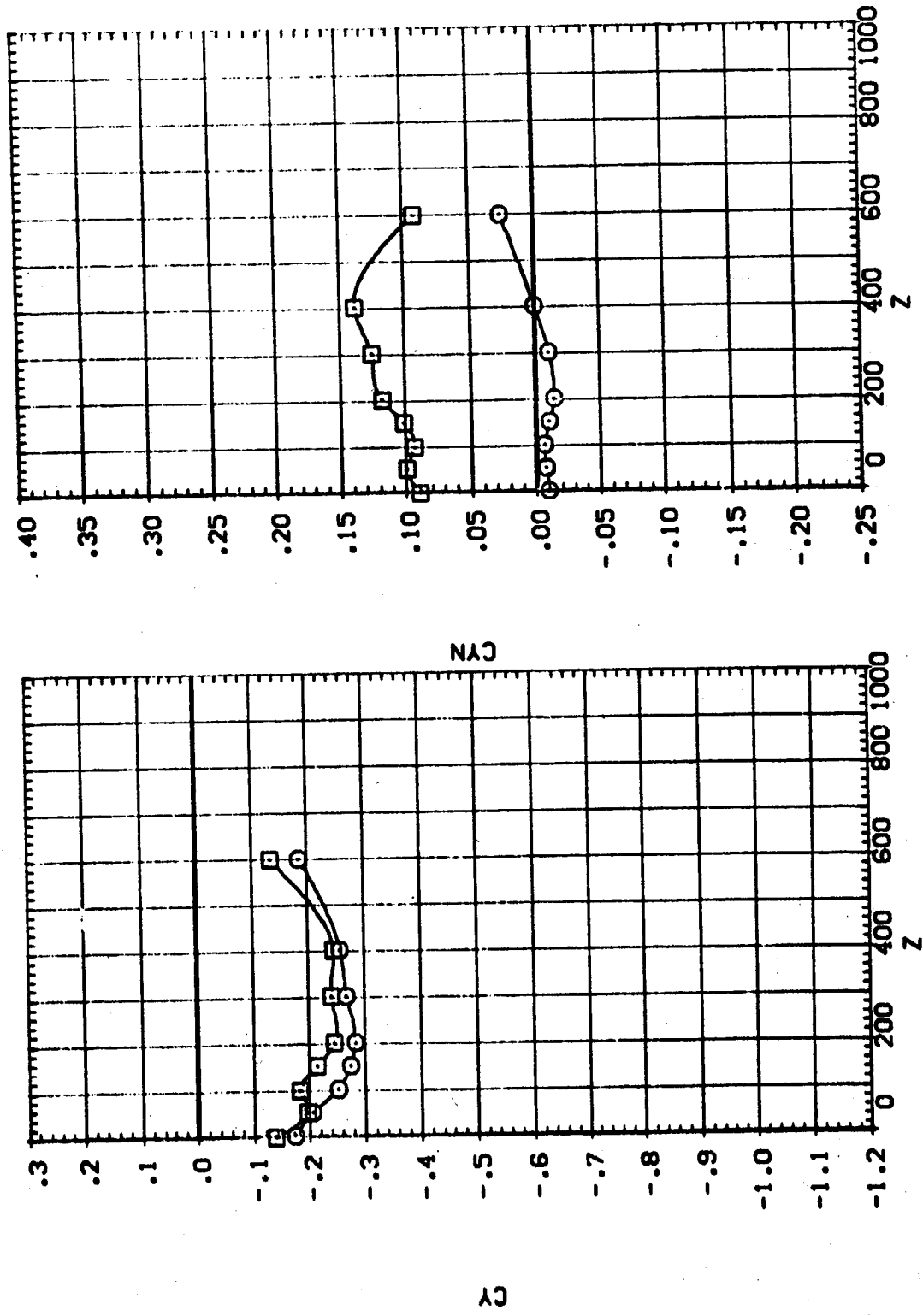


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ159)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|----------|--|
| | | MACH | PTOTAL | PTOTAL | |
| ○ | .259 | 4.510 | .000 | 28.900 | |
| □ | 900.700 | ALPHA | BETA | .000 | |
| | | DALPHA | DBETA | .000 | |
| | | Y | PC-HSR | 1500.000 | |



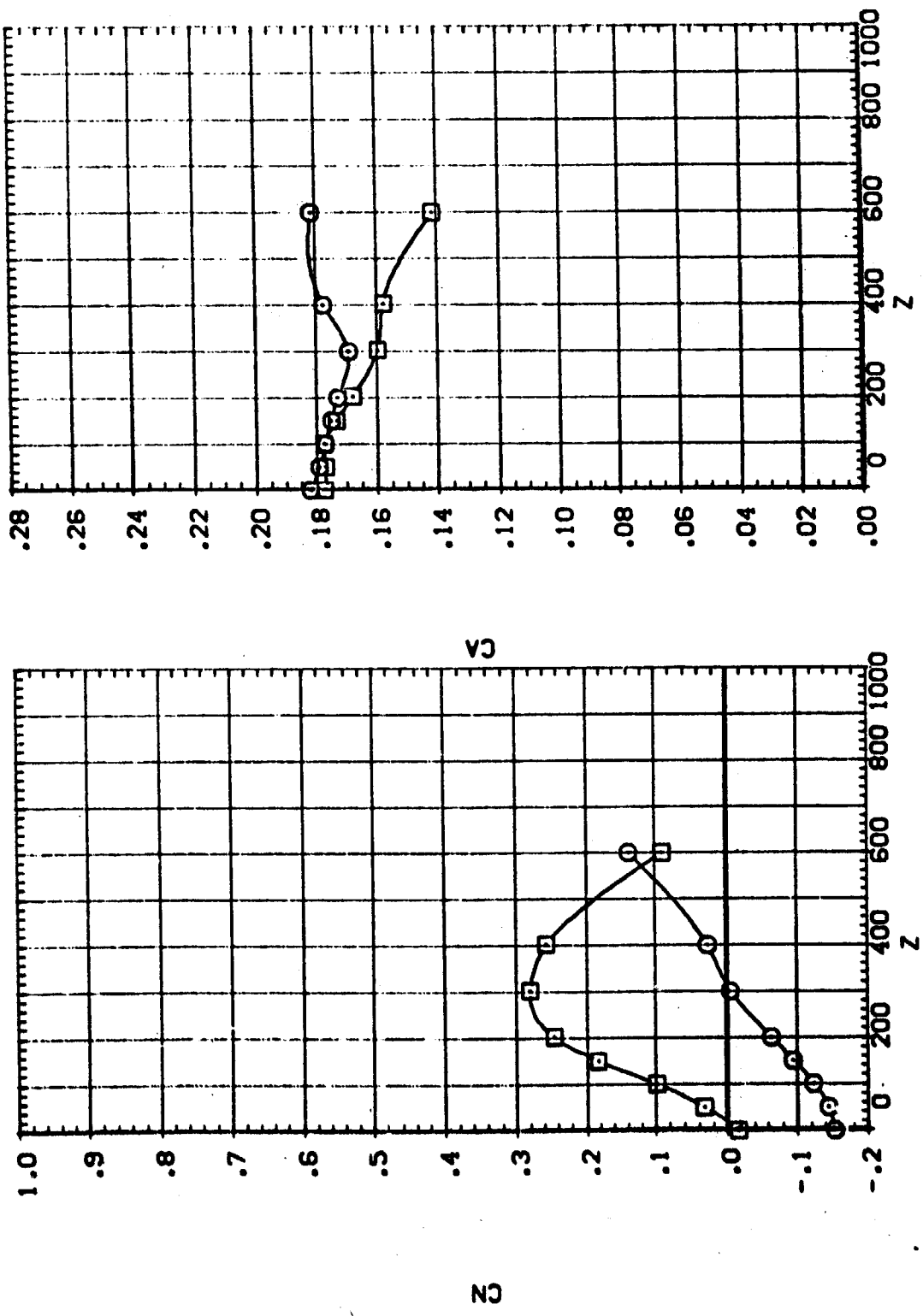
SYMBOL

○

□

| PARAMETRIC VALUES | | | |
|-------------------|---------|-------|----------|
| MACH | 4.510 | PITOT | 28.900 |
| ALPHA | .000 | BETA | .000 |
| DALPHA | 5.000 | DBETA | .000 |
| Y | 400.000 | POWER | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

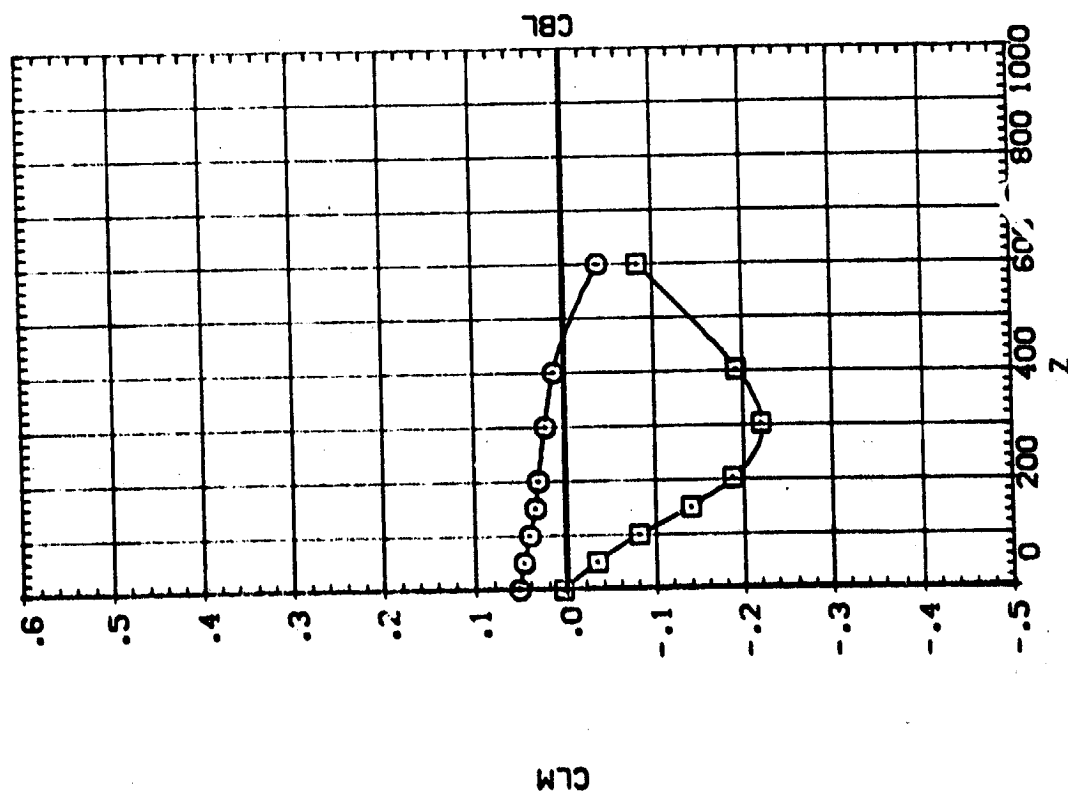
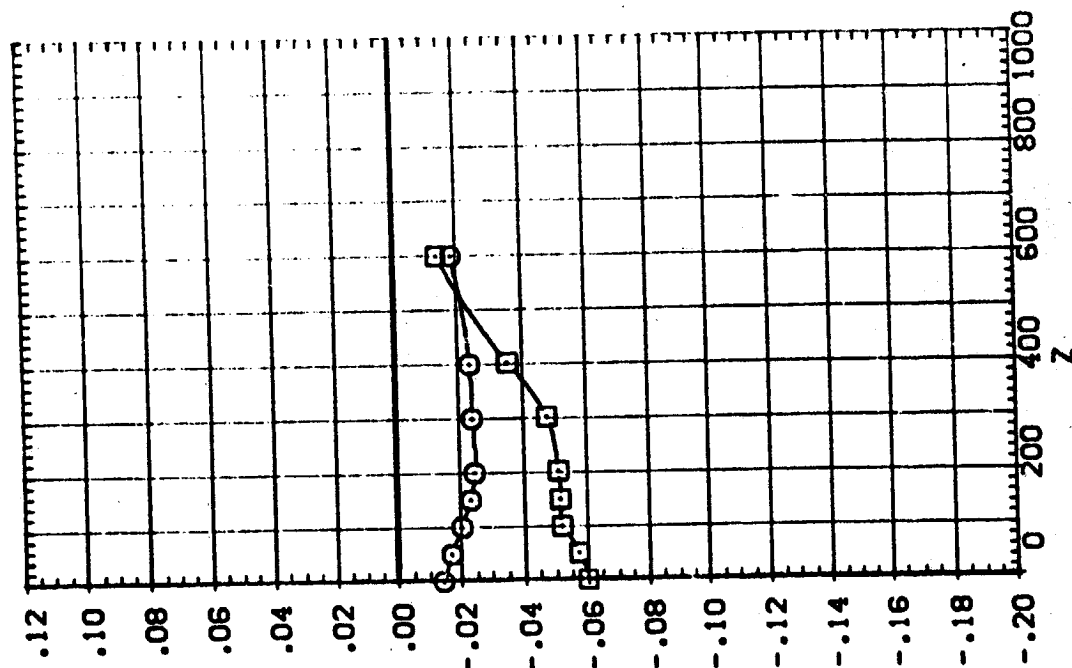


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ160)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH PITCH TOTAL 28.900
 0 305 4.510 .000 BETA .000
 1 740 5.000 DBETA .000
 2 400.000 POWER 1500.000
 3 DALPHA
 4 V

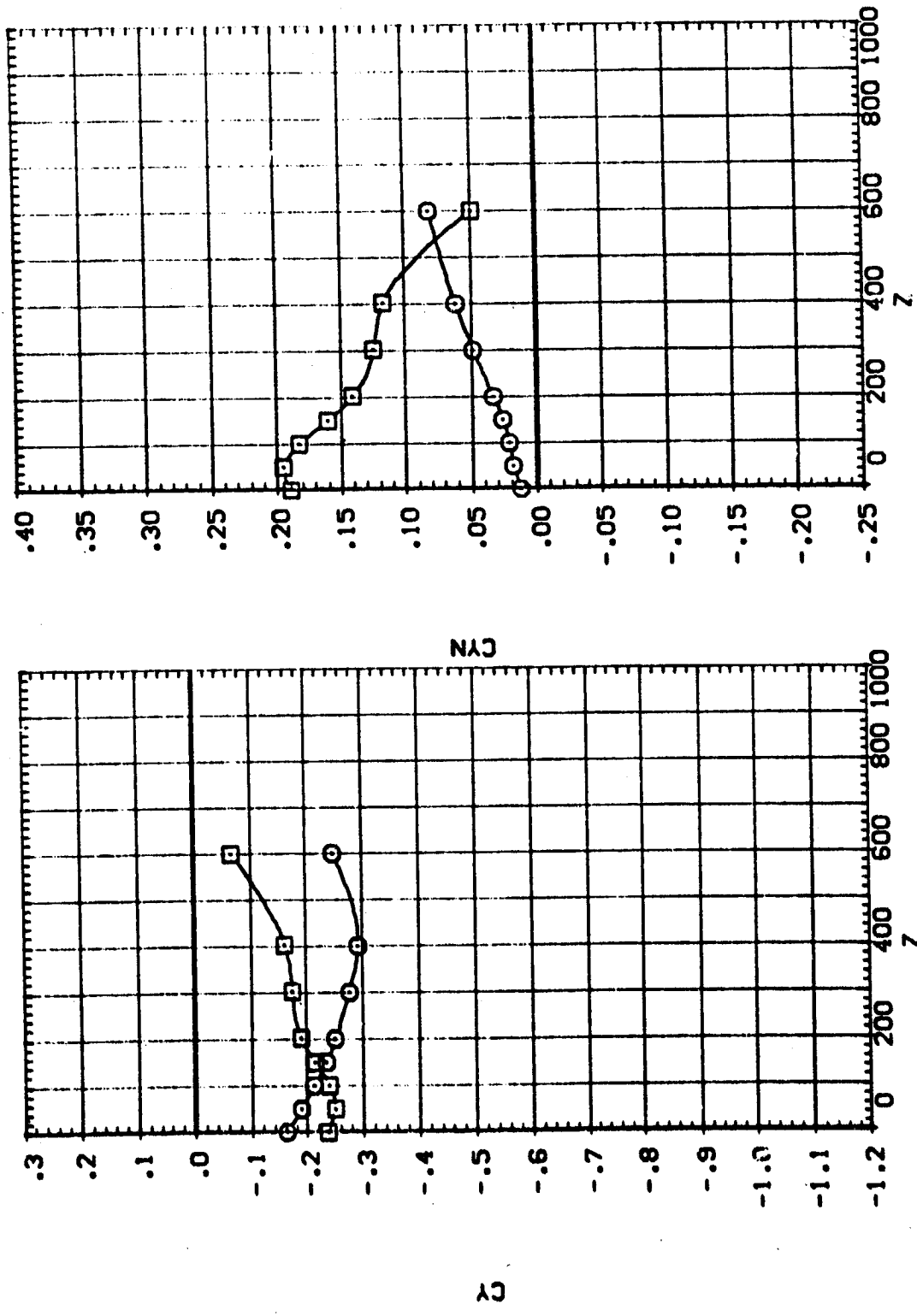


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X
 O 900.740
 □ 900.740

PARAMETRIC VALUES
 MACH 4.510 PTOTAL 28.900
 ALPHA .000 BETA .000
 DALPHA 5.000 DBETA .000
 Y 400.000 PC46R 1500.000

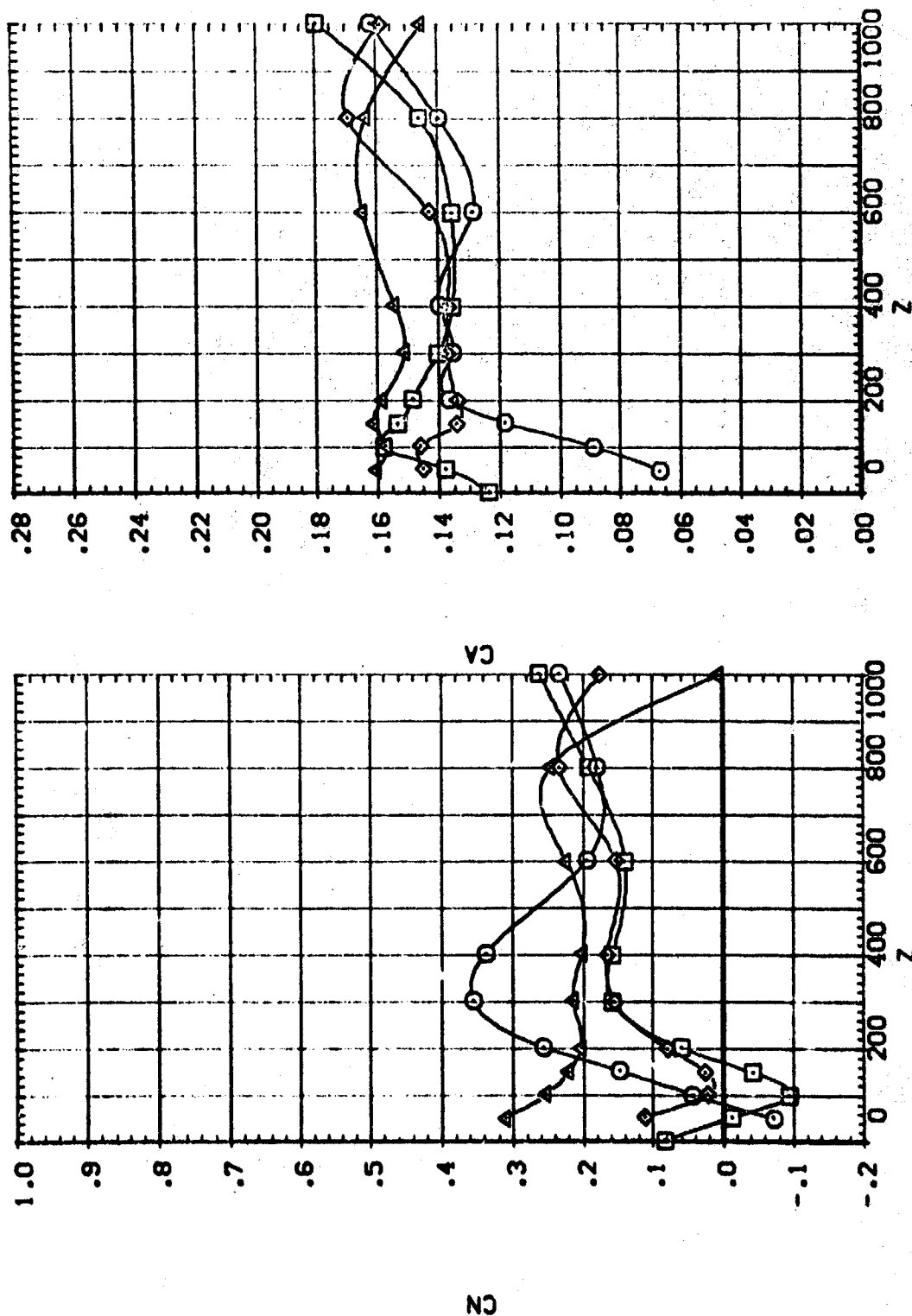


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ161)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| □ | 300.540 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.690 | DALPHA | -.000 | DBETA | .000 |
| △ | 900.840 | Y | .000 | PC-MER | 1500.000 |

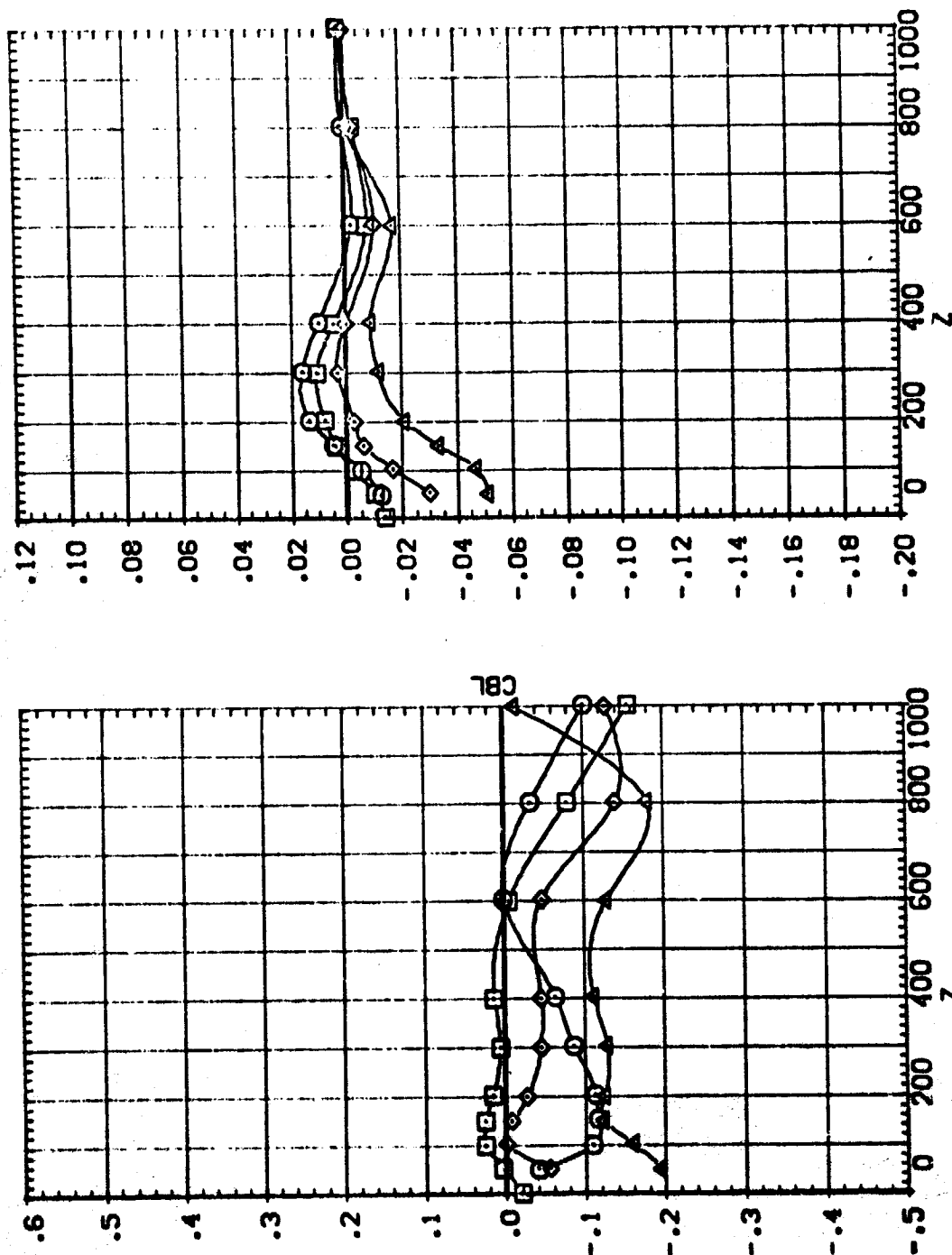


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ161)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| ○ | 300.540 | ALPHA | .000 | BETA | .000 |
| □ | 600.690 | DALPHA | -5.000 | DBETA | .000 |
| ◇ | 900.840 | Y | .000 | PC-MER | 1500.000 |

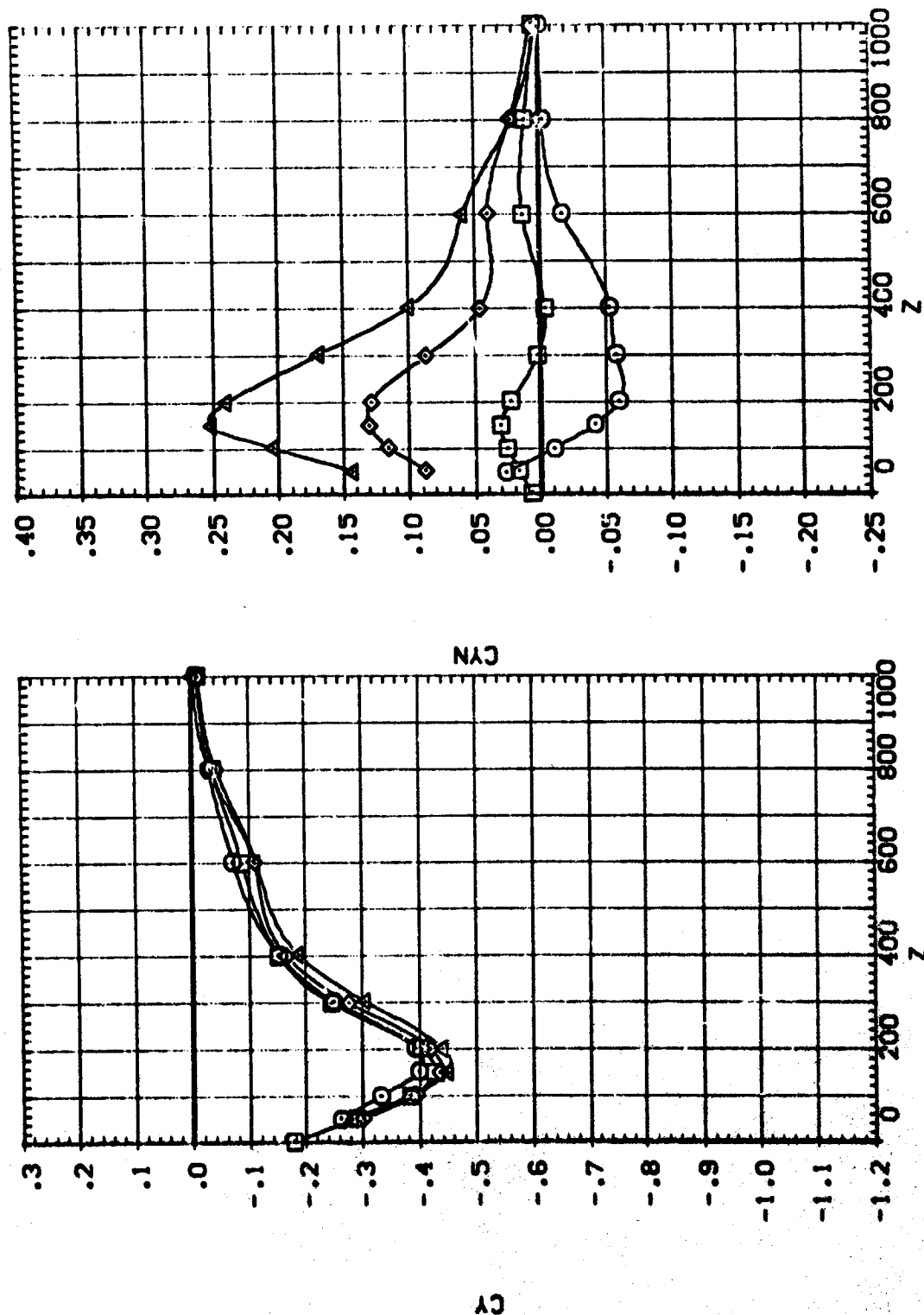


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ161)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

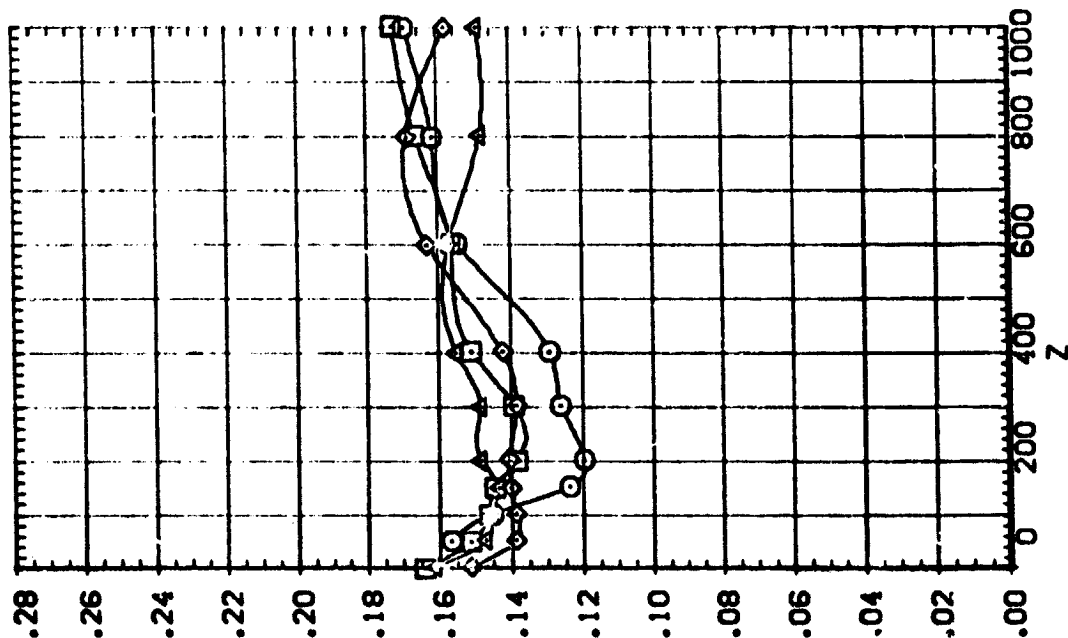
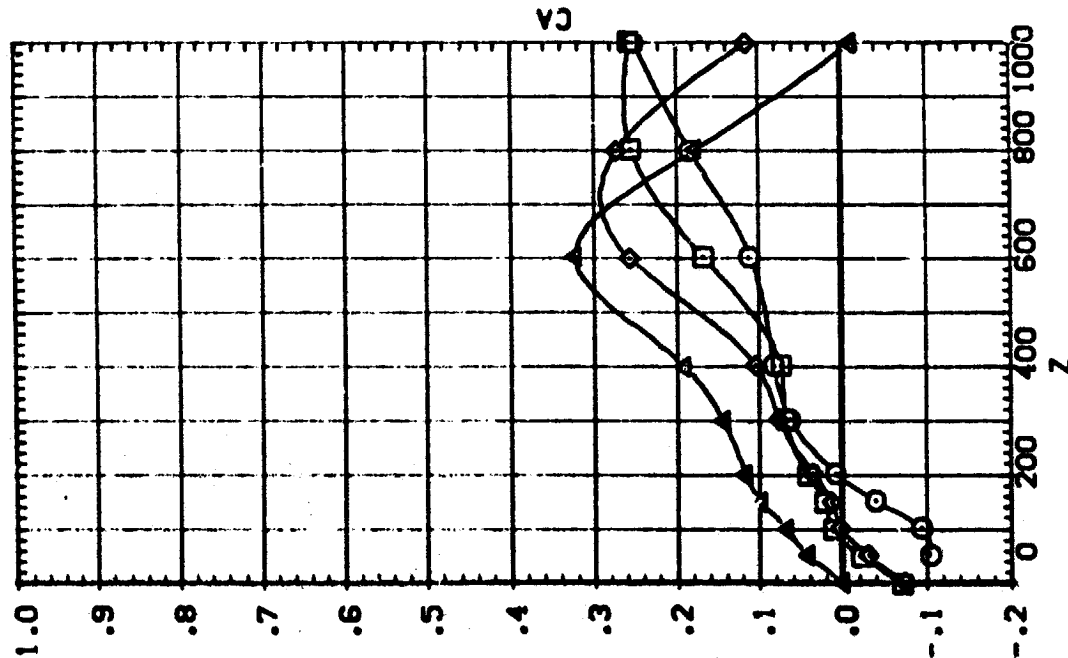
| SYMBOL | X | MACH | PARAMETRIC VALUES | 28.900 |
|--------|---------|-------|-------------------|---------|
| ○ | 300.540 | ALPHA | 4.510 | PITOTAL |
| ◇ | 600.650 | DBETA | .000 | BETA |
| △ | 900.840 | POWER | -5.000 | DBETA |
| | | | .000 | POWER |
| | | | 1500.000 | |



SYMBOL

○ □ ◇ △

| PARAMETRIC VALUES | |
|-------------------|----------|
| X | .282 |
| MACH | 4.510 |
| PIOTAL | 28.900 |
| ALPHA | .000 |
| BETA | .000 |
| ALPHA | -5.000 |
| BETA | .000 |
| PC-HSR | 1500.000 |
| Y | 200.000 |



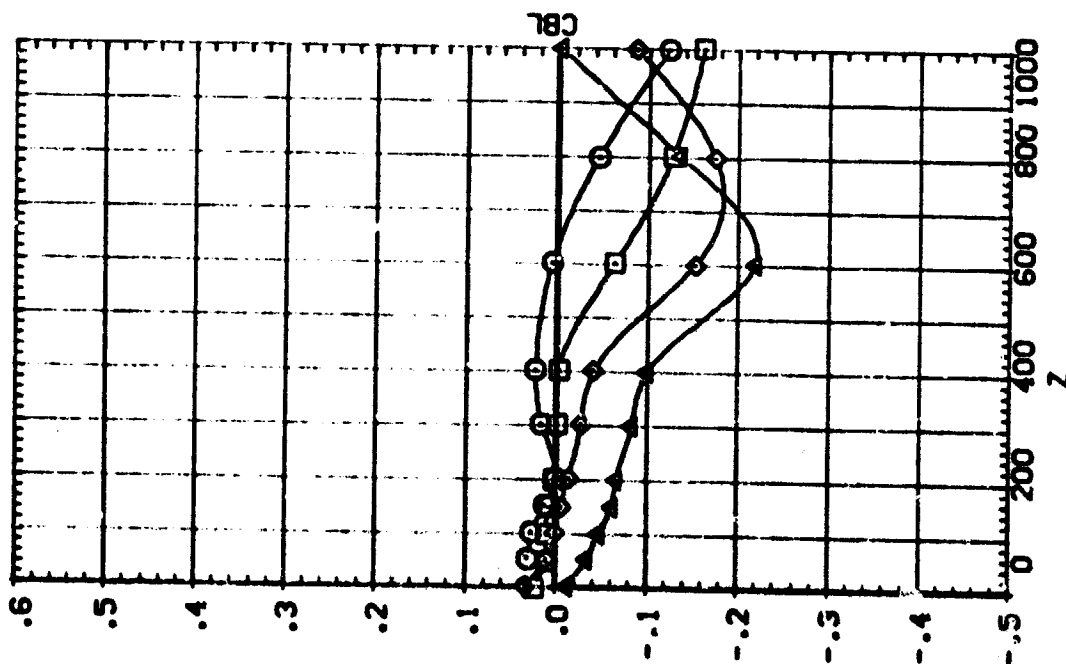
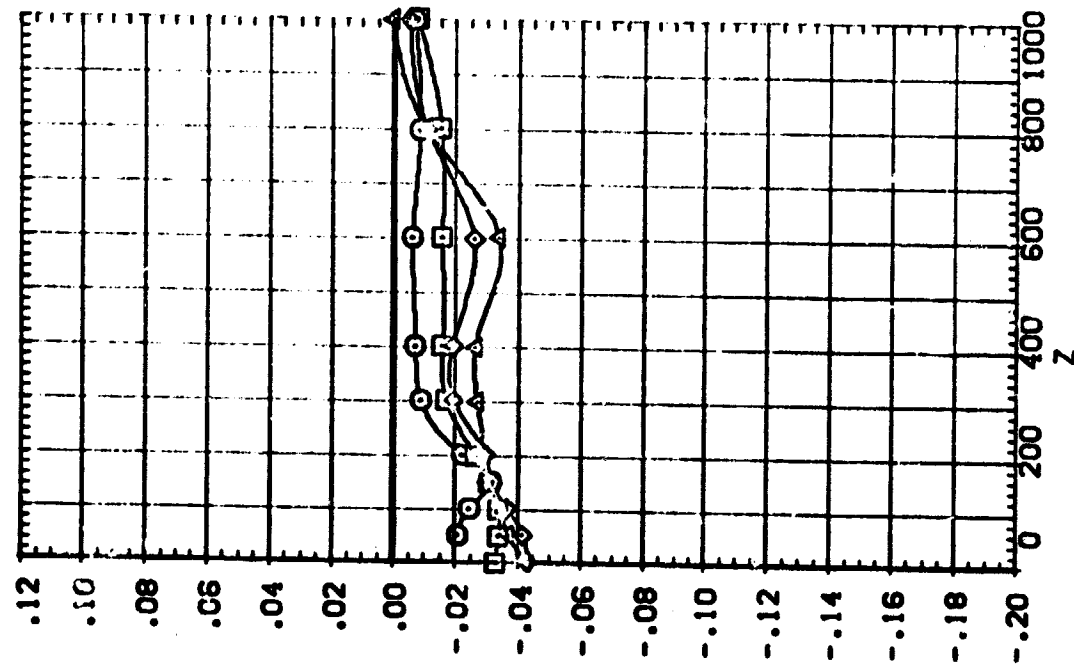
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ162)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

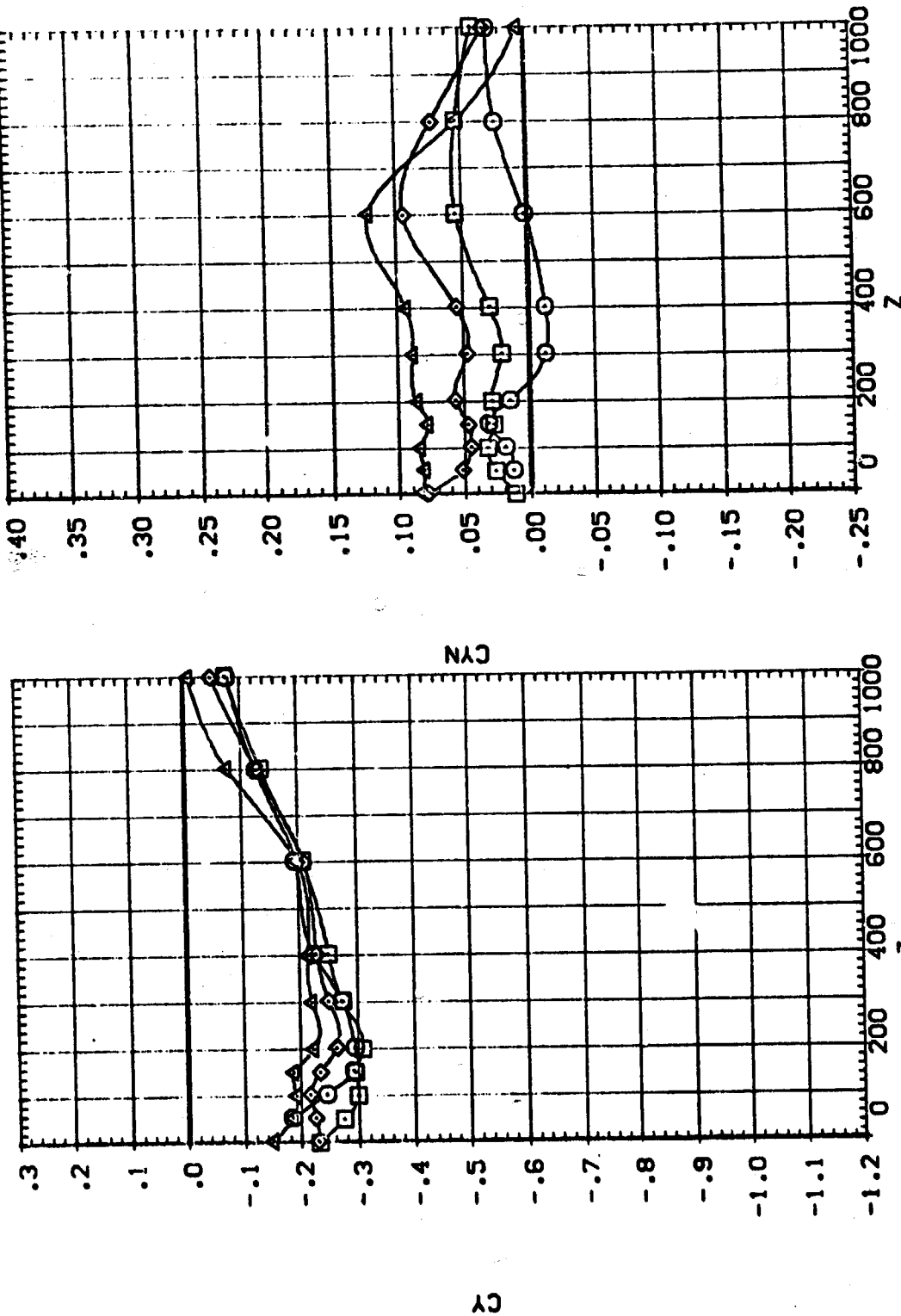
| X | PARAMETRIC VALUES | | | |
|---------|-------------------|---------|--------|----------|
| | MACH | 4.510 | POTIAL | 28.900 |
| 300.410 | ALPHA | .000 | BETA | .000 |
| 600.600 | DELTA | -5.000 | PC-MR | 1500.000 |
| 900.760 | Y | 200.000 | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH TOTAL 28.900
300.410 ALPHA .000 BETA .000
600.600 DIALPHA -5.000 DBETA .000
900.750 Y 200.000 PC-MBR 1500.000

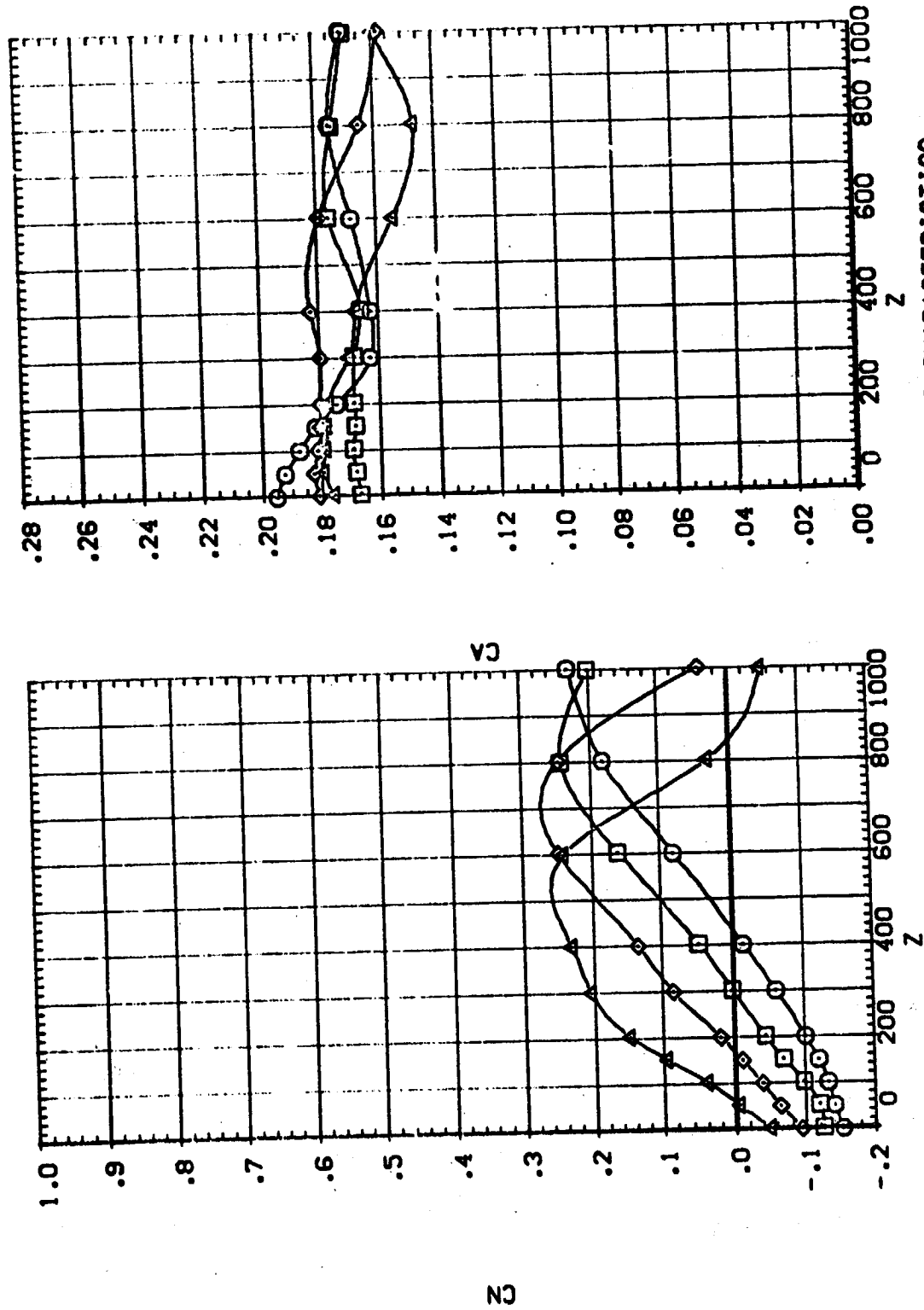


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ163)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | PTOTAL | 28.900 | |
| ○ | 300.450 | ALPHA | .000 | BETA | .000 | |
| □ | 600.470 | DALPHA | -5.000 | DBETA | .000 | |
| ◇ | 900.750 | Y | 400.000 | PC-MER | 1500.000 | |



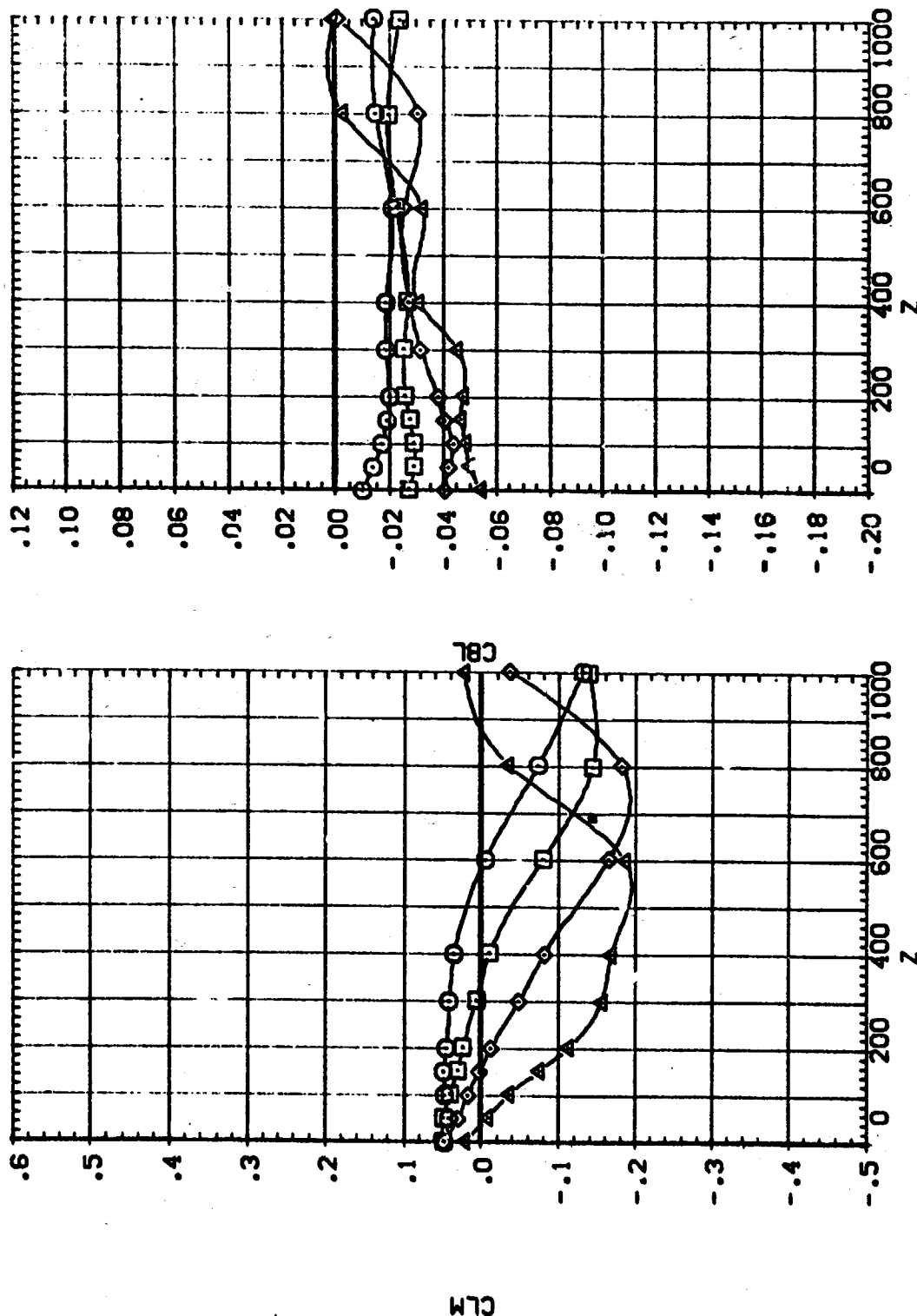
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| X | MACH | ALPHA | DALPHA | Y | PTOTAL | BETA | DBETA | PC#68 |
|------|-------|-------|--------|---------|--------|------|-------|----------|
| .274 | 4.510 | .000 | -5.000 | 400.000 | 28.900 | .000 | .000 | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

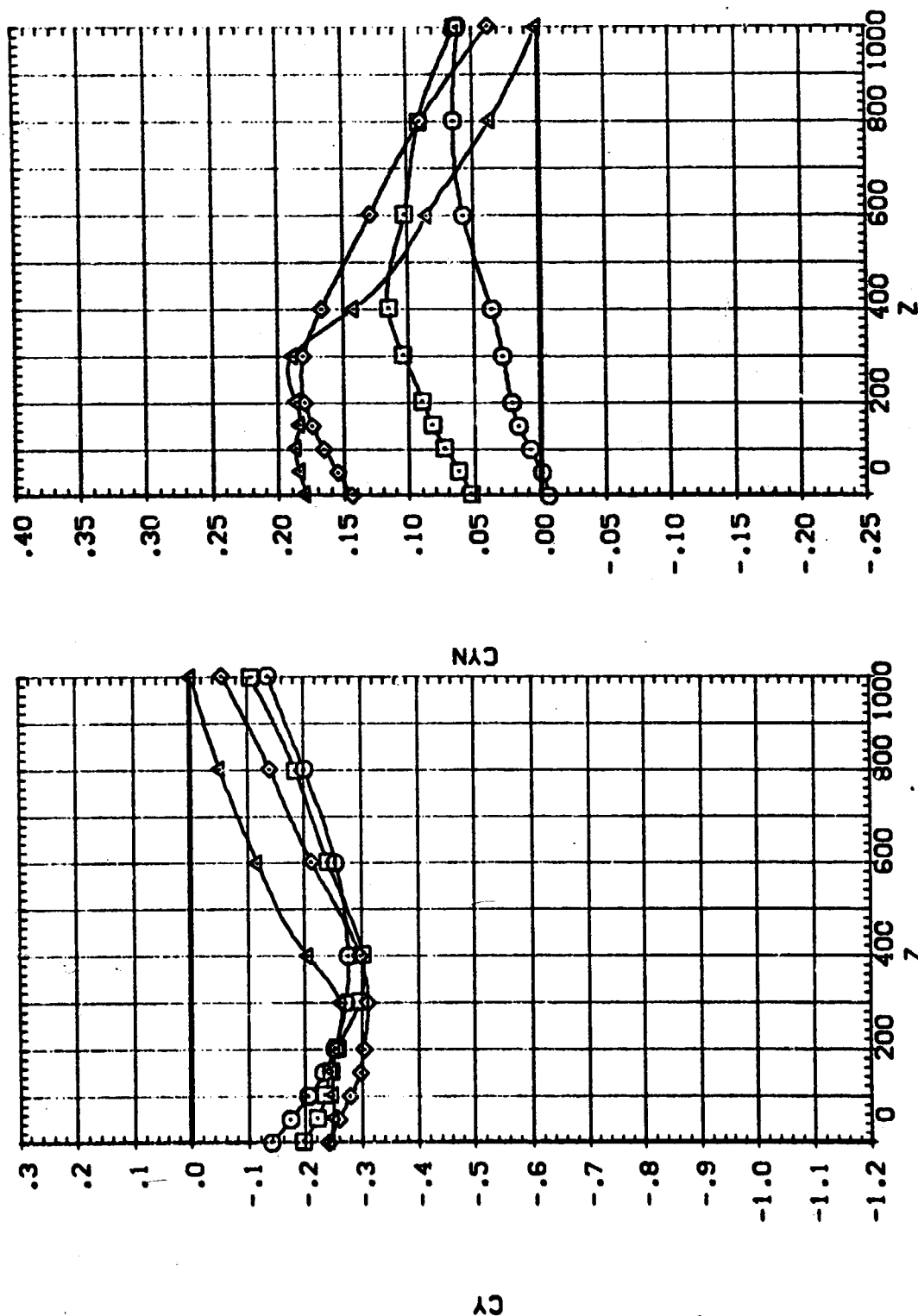


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ163)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYM-BOL | X | PARAMETRIC VALUES | | | | |
|---------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | PTOTAL | 20.900 | |
| ○ | 300.450 | ALPHA | .000 | BETA | .000 | |
| □ | 600.470 | DALPHA | -5.000 | DBETA | .000 | |
| △ | 900.750 | Y | 400.000 | PC-MER | 1500.000 | |



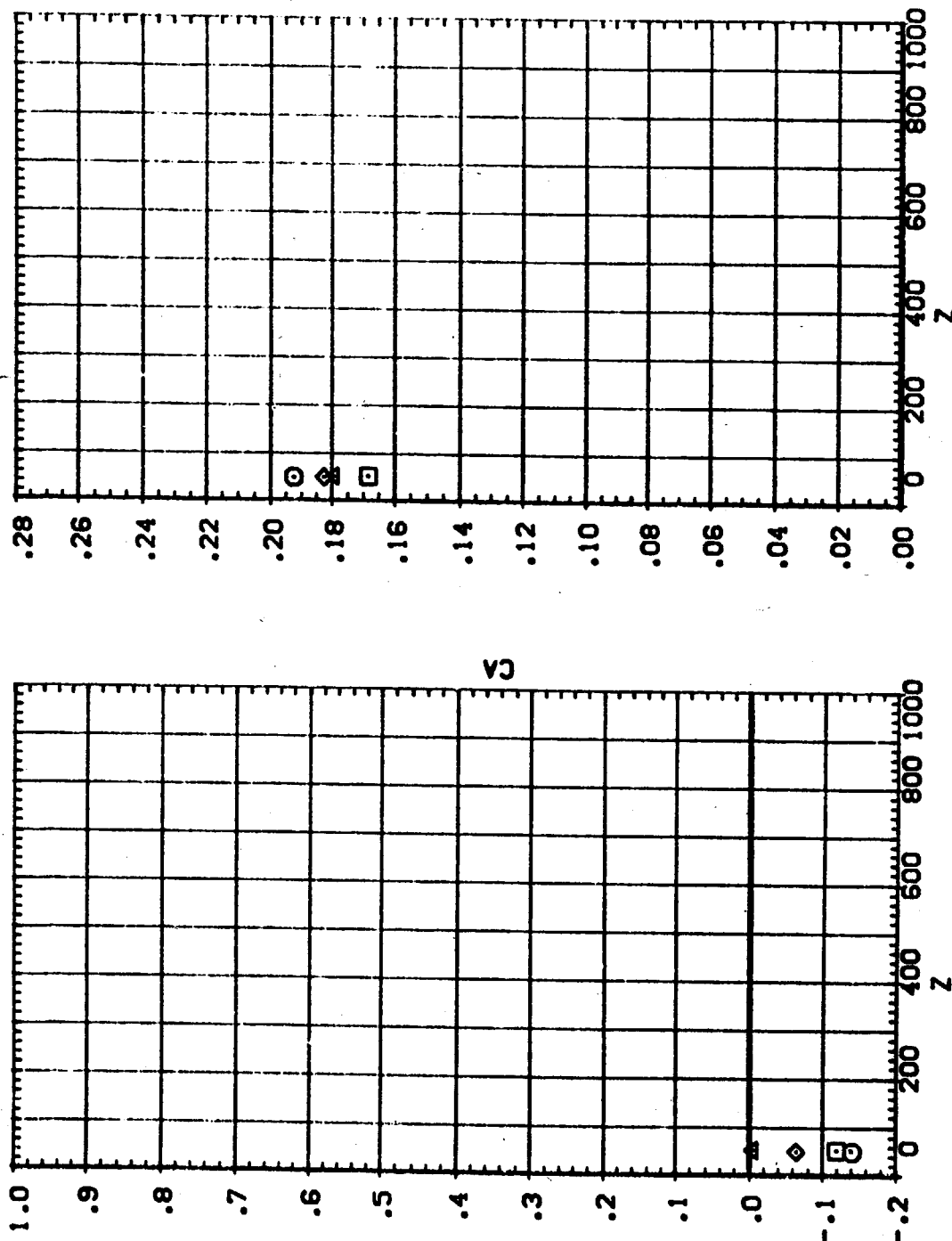
SYMBOL

○
□
◇
△

PARAMETRIC VALUES

| | MACH | 4.510 | PITOTAL | 28.500 |
|---------|--------|---------|---------|----------|
| 300.460 | ALPHA | .000 | BETA | .000 |
| 600.570 | DALPHA | -5.000 | OBETA | .000 |
| 900.630 | Y | 800.000 | PC-MER | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

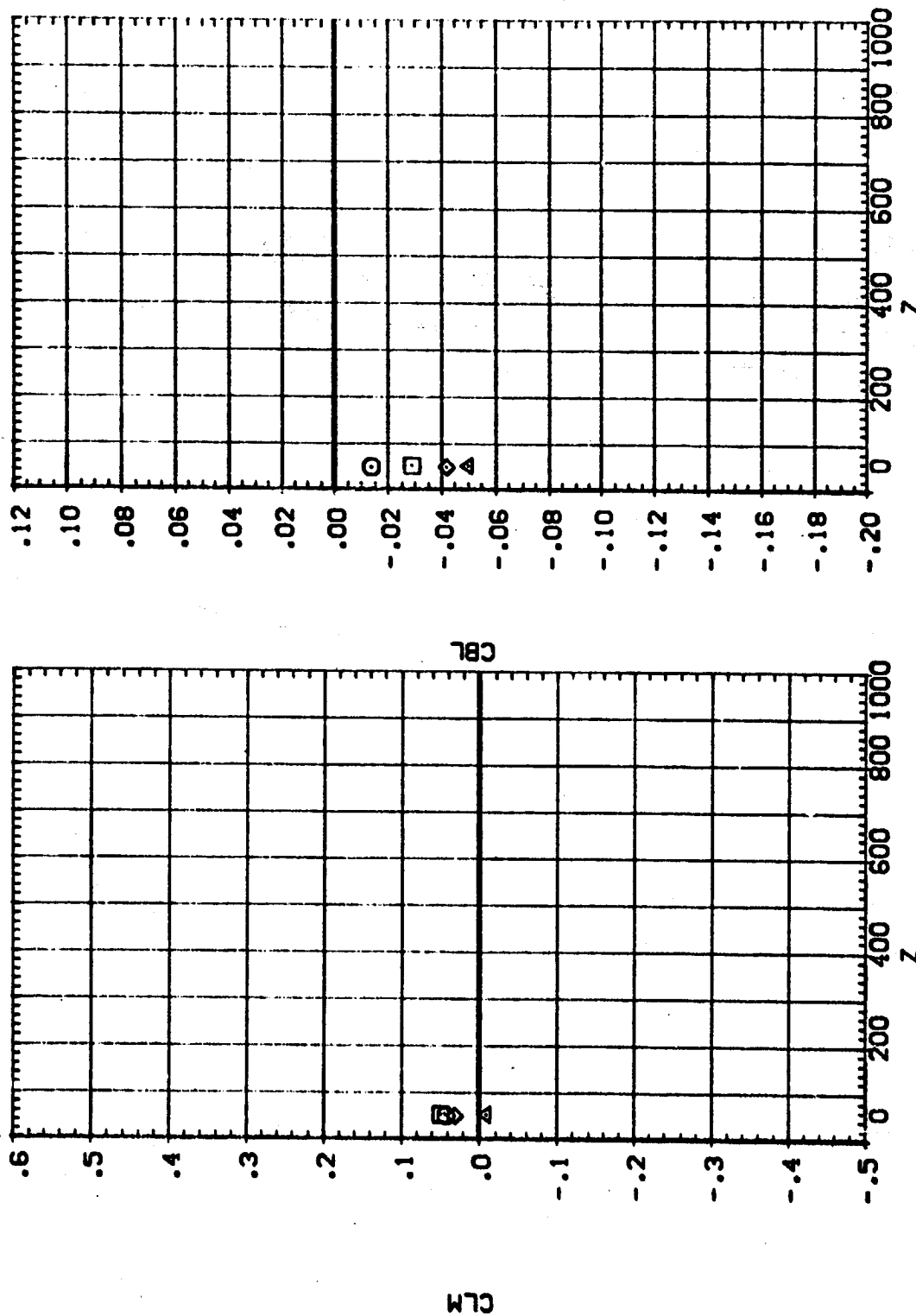


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ164)

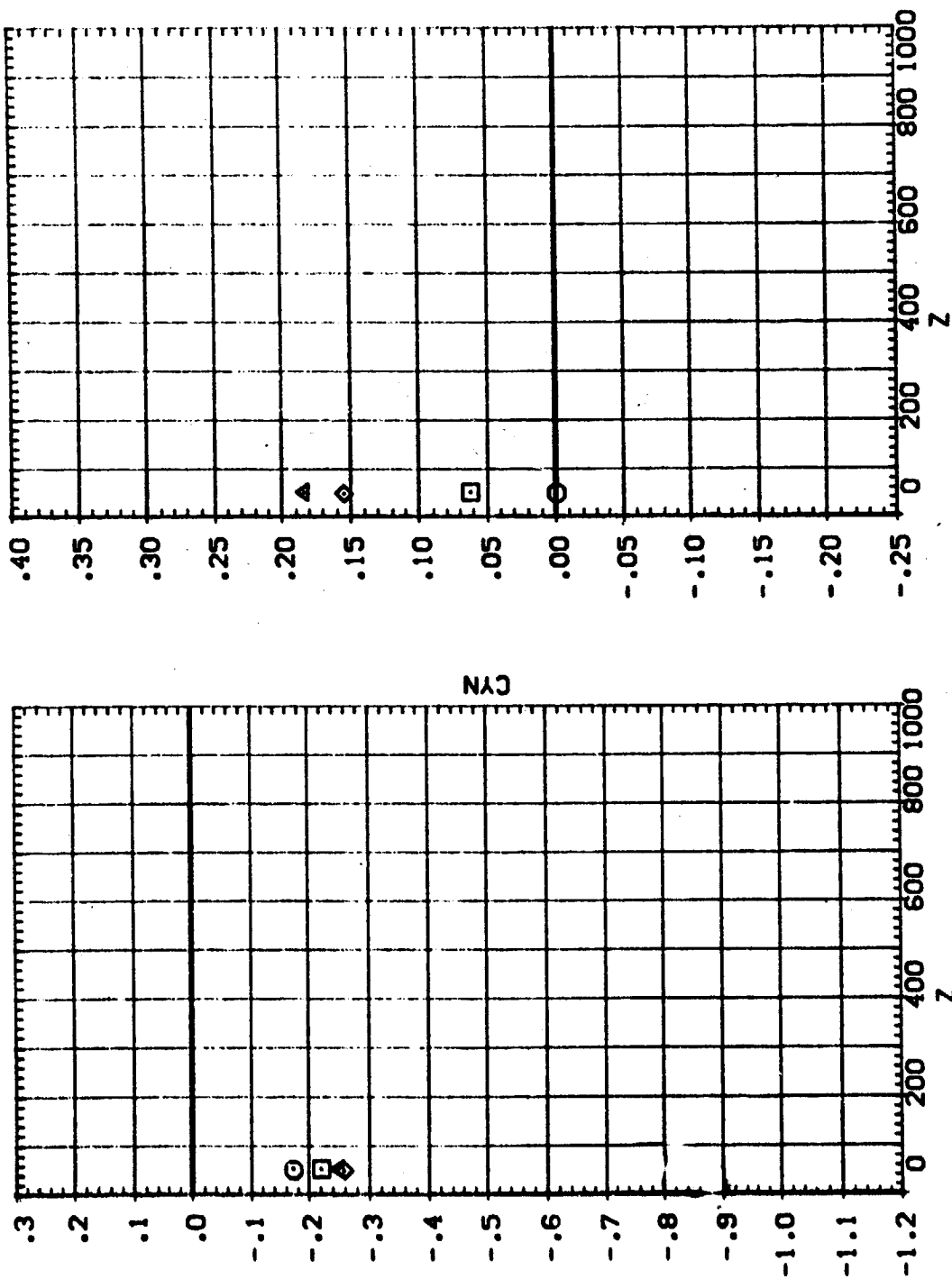
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | POTIAL | 28.900 | |
| ○ | .259 | ALPHA | .000 | BETA | .000 | |
| □ | 300.460 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.570 | ALPHA | -5.010 | DBETA | .000 | |
| △ | 900.630 | Y | 800.010 | PC-HSR | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | PTOTAL | 28.900 | |
| ○ | .259 | ALPHA | .000 | BETA | .000 | |
| □ | 300.460 | DALPHA | -5.000 | DBETA | .000 | |
| ◇ | 600.570 | Y | 800.000 | PC-MER | 1500.000 | |
| △ | 900.630 | | | | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

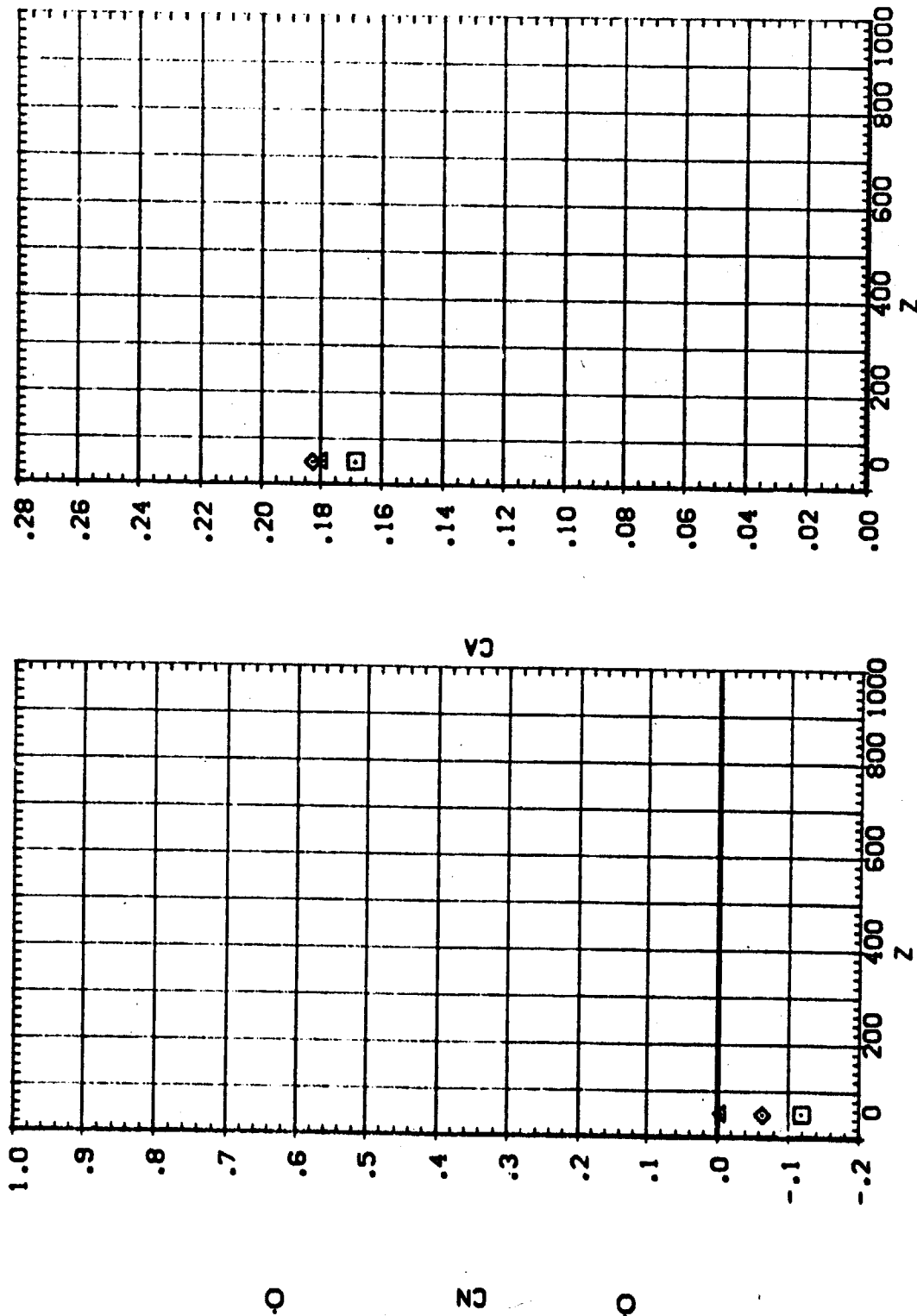
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ165)

SYMBOL

□ □ ◇ △

| PARAMETRIC VALUES | |
|-------------------|----------|
| MACH | 4.510 |
| PTOTAL | 28.900 |
| ALPHA | .000 |
| BETA | .000 |
| DALPHA | -10.000 |
| DBETA | .000 |
| Y | 800.000 |
| POHBR | 1500.000 |

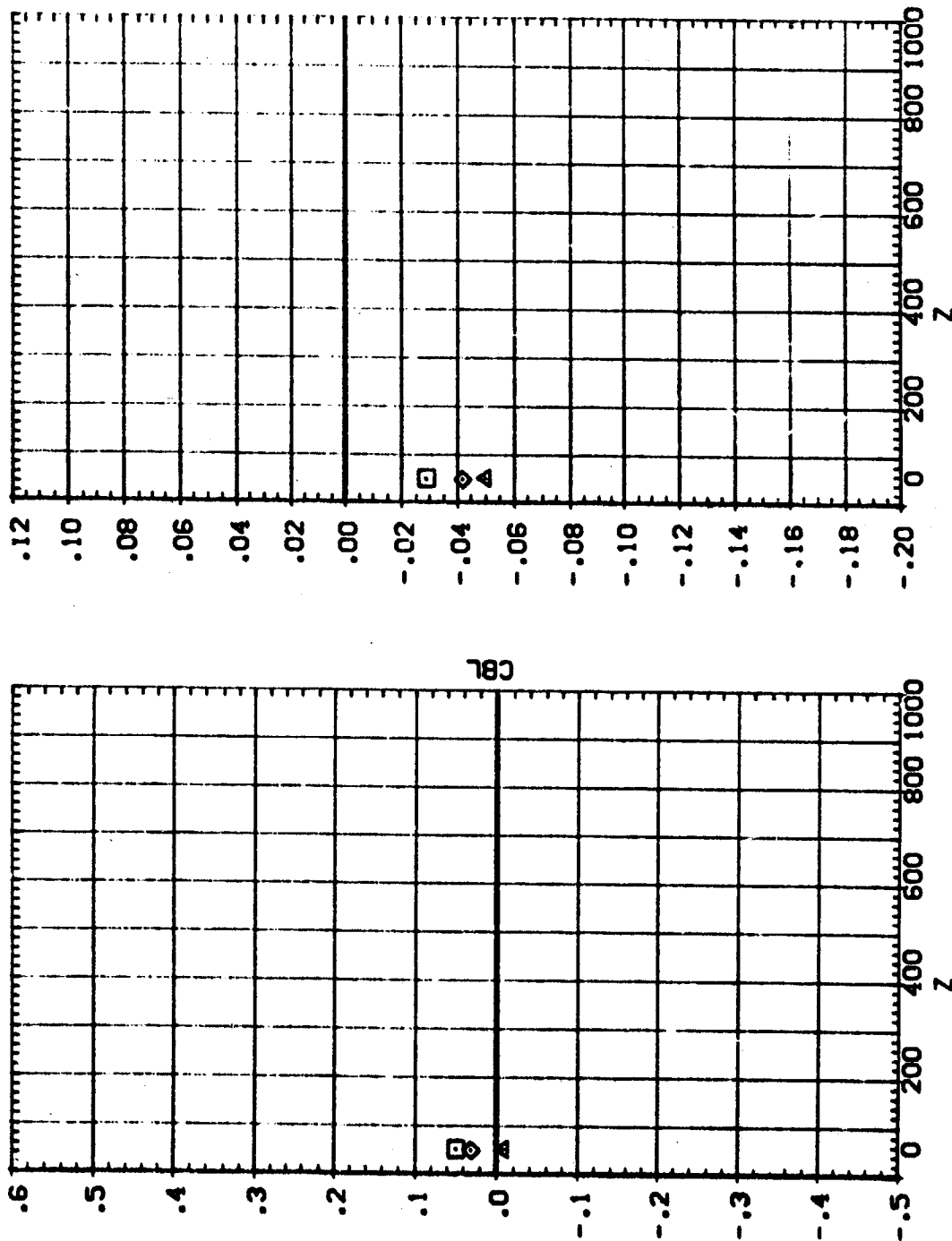
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MOCH | 4.510 | PTOTAL | 28.800 |
| □ | -646 | ALPHA | .000 | BETA | .000 |
| ◇ | 300.430 | DALPHA | -10.000 | DBETA | .000 |
| △ | 600.590 | Y | 800.000 | PO+GR | 1500.000 |
| | 900.710 | | | | |

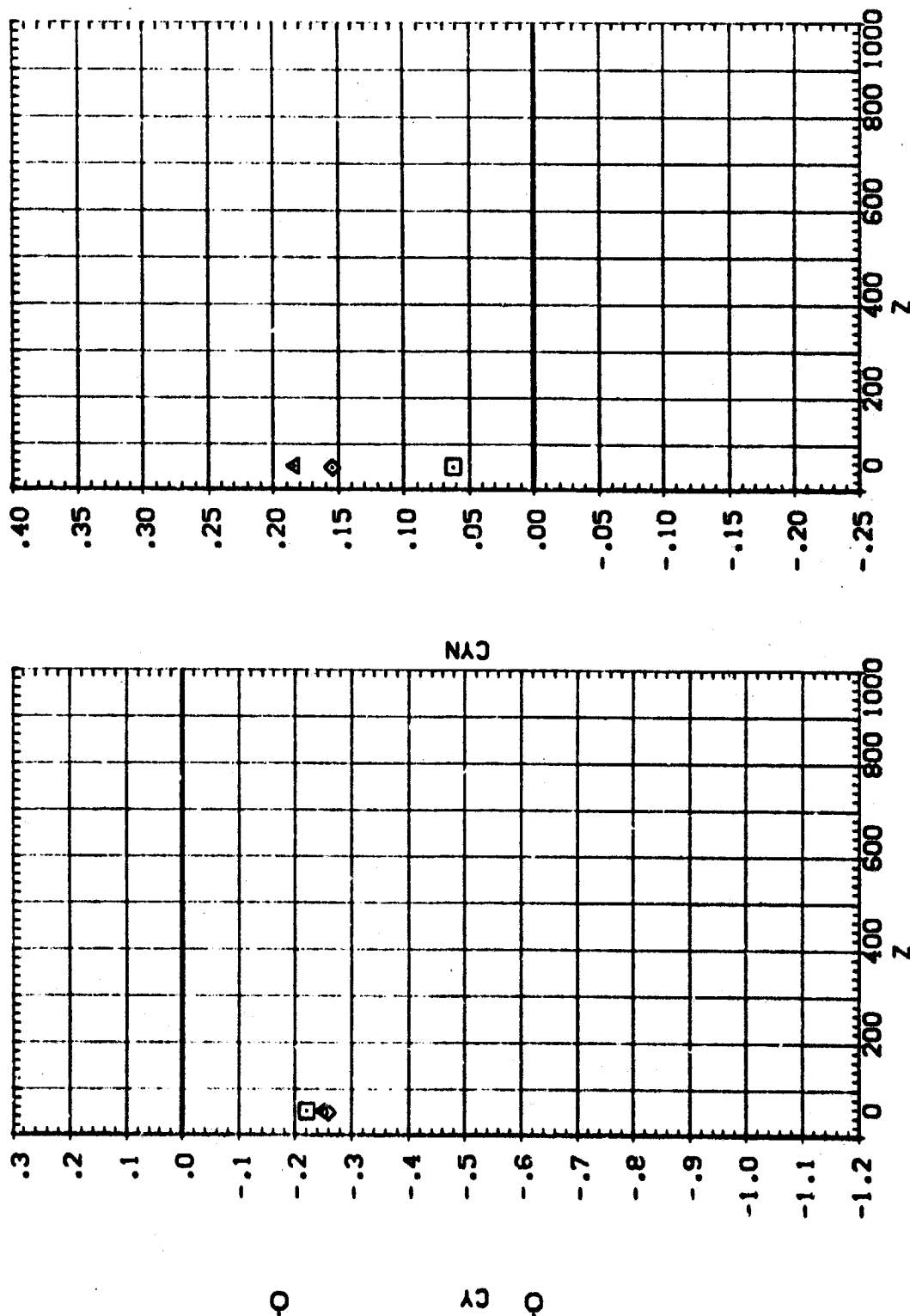


EFFECT OF SRB W/PLUMES SEPARATION ON 098/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ165)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

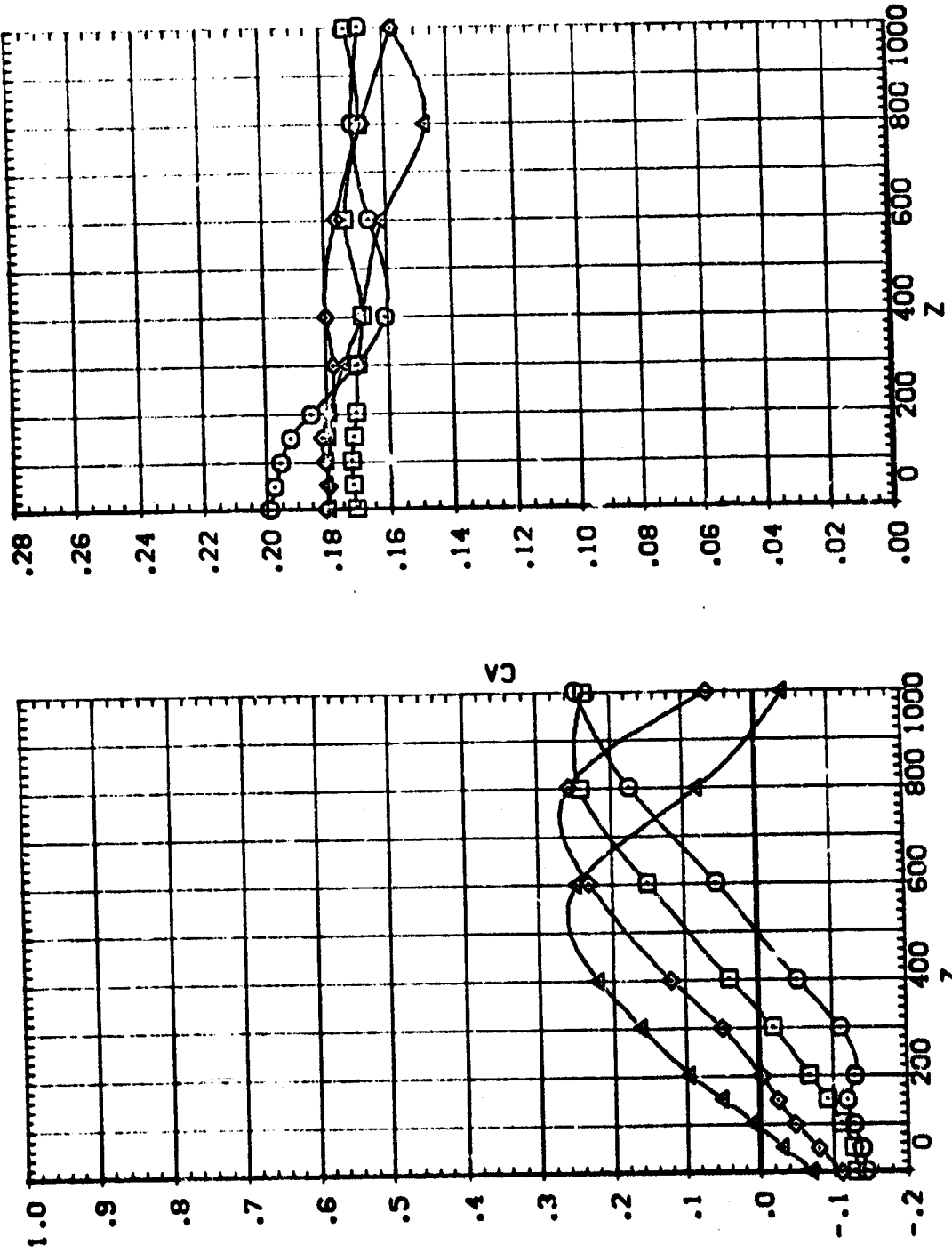
| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | -0.646 | 4.510 | P TOTAL 28.900 |
| □ | 300.430 | .000 | BETA .000 |
| ◇ | 600.590 | -10.000 | DBETA .000 |
| △ | 900.710 | 800.000 | PCWBR 1500.000 |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBL. | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | POTIAL | 28.900 |
| ○ | 300.610 | ALPHA | .000 | BETA | .000 |
| □ | 600.640 | DALPHA | -10.000 | DBETA | .000 |
| ◇ | 900.640 | Y | 400.000 | PO+PR | 1500.000 |

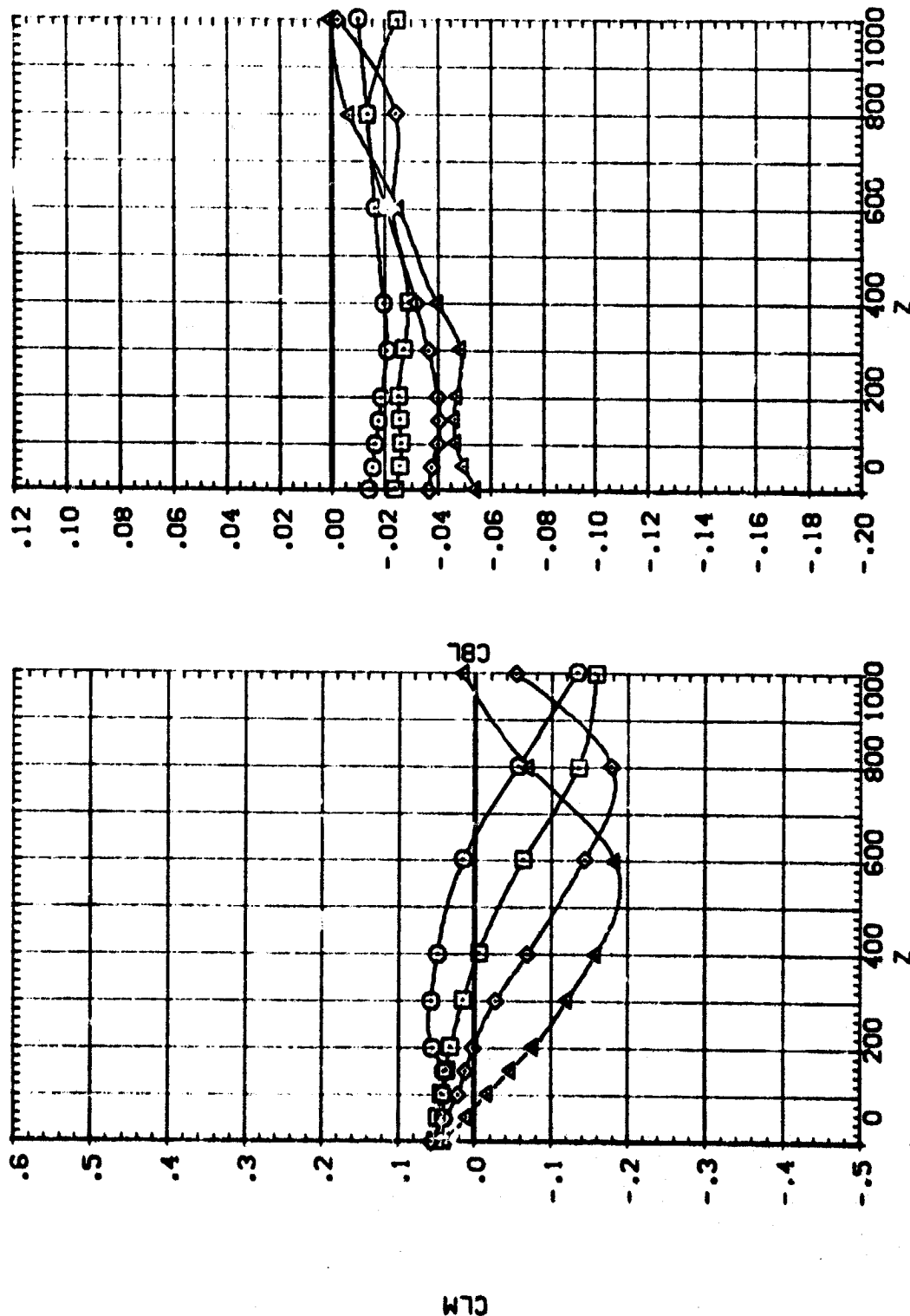


EFFECT OF SR6 W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ166)

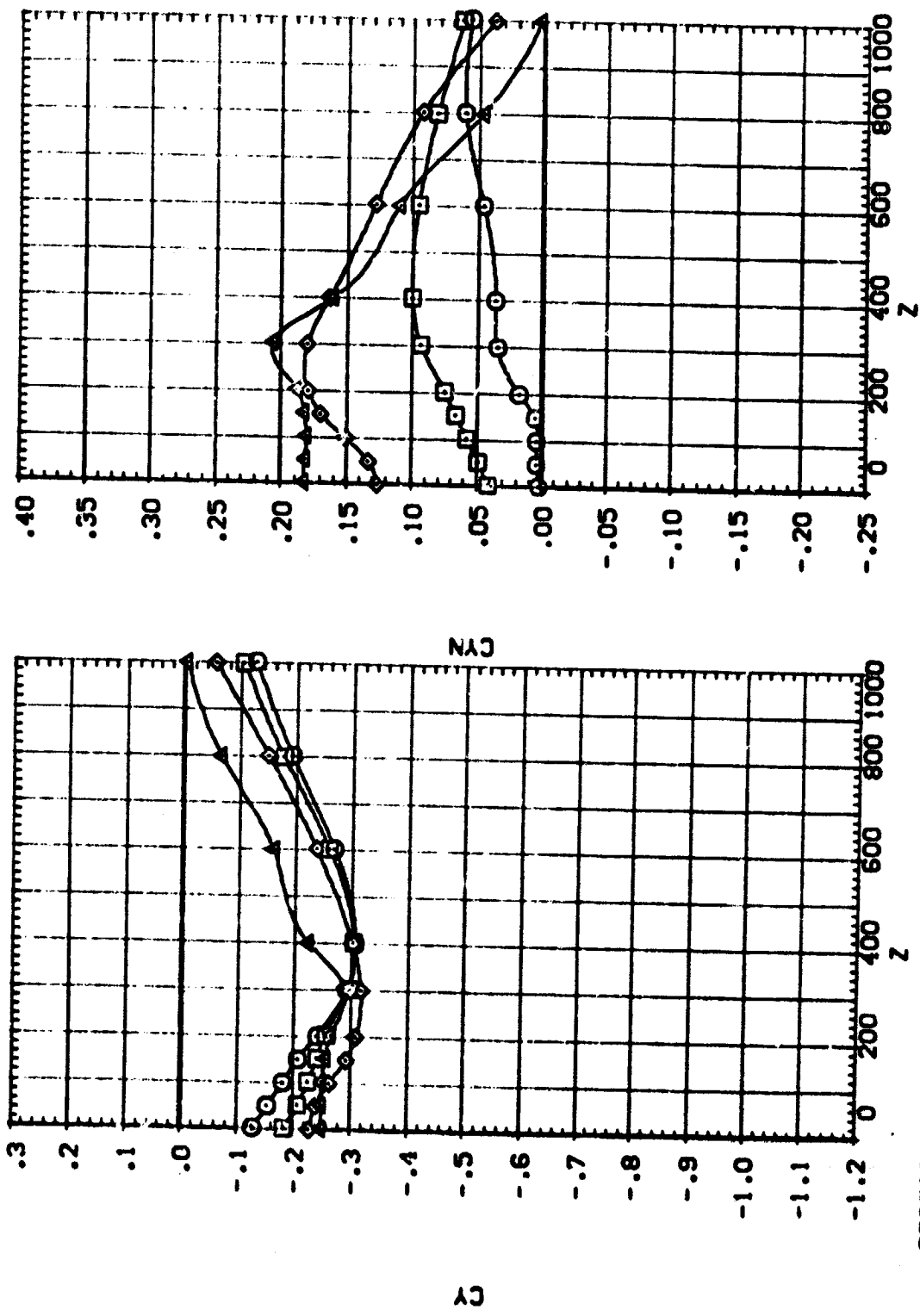
| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .280 | 4.510 | POTIAL 28.900 |
| □ | 300.610 | .000 | BETA .000 |
| ◇ | 600.640 | -10.000 | DBETA .000 |
| △ | 900.640 | 400.000 | PC-MER 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MAOH | 4.510 | PTOTAL | 28.900 | |
| ○ | .280 | ALPHA | .000 | BETA | .000 | |
| □ | 300.610 | DALPHA | -10.000 | DBETA | .000 | |
| ◇ | 600.640 | Y | 400.000 | PCWER | 1500.000 | |
| △ | 900.640 | | | | | |



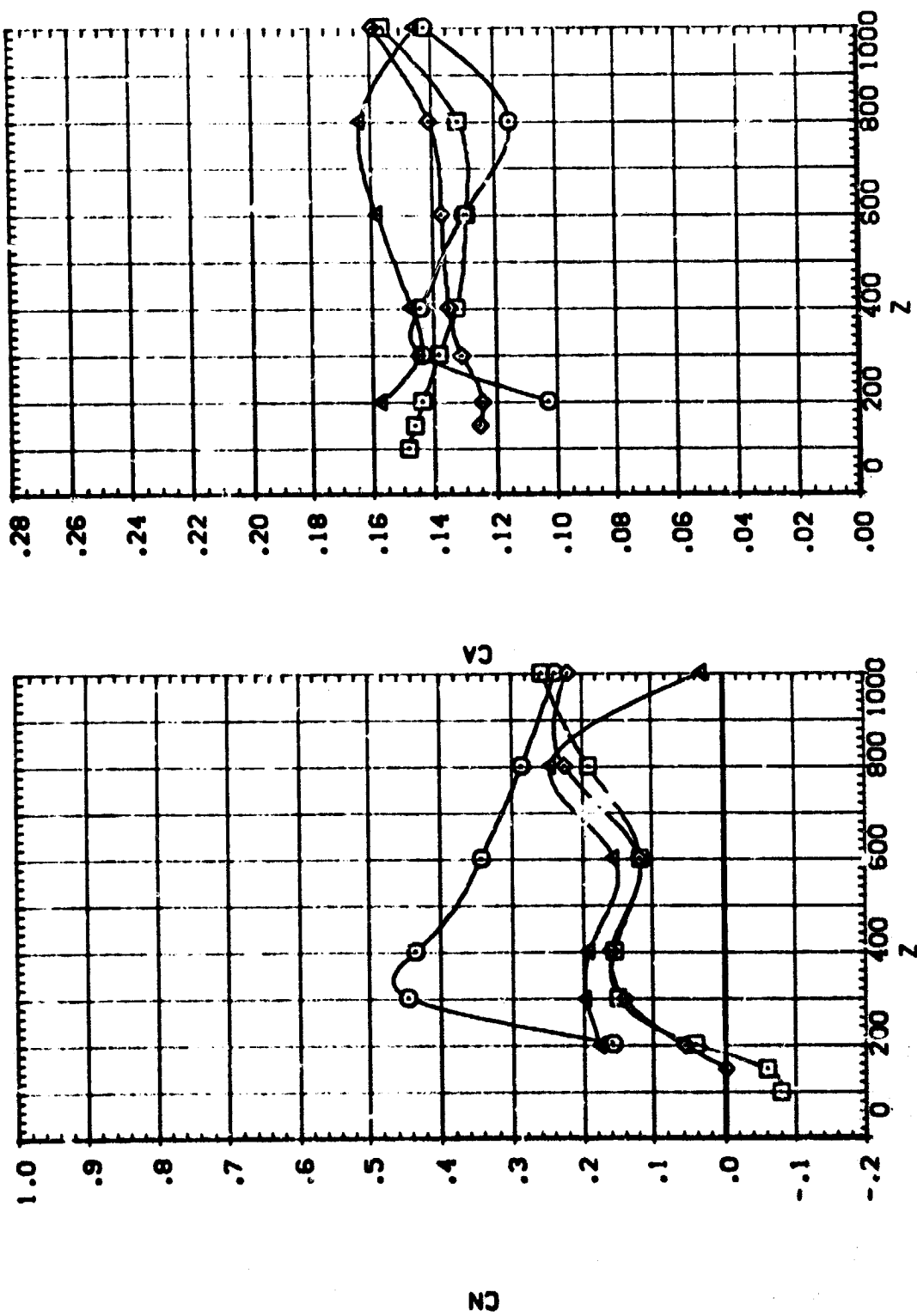
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ167)

SYMBOL
 ○ □ ◇ △

| PARAMETRIC VALUES | | | | |
|-------------------|-------|---------|--------|----------|
| X | MACH | 4.510 | PTOTAL | 28.900 |
| 300.550 | ALPHA | .000 | BETA | .000 |
| 600.550 | DAUPA | -10.000 | DBETA | .000 |
| 900.550 | Y | .000 | PC-MR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ167)

SYMBOL

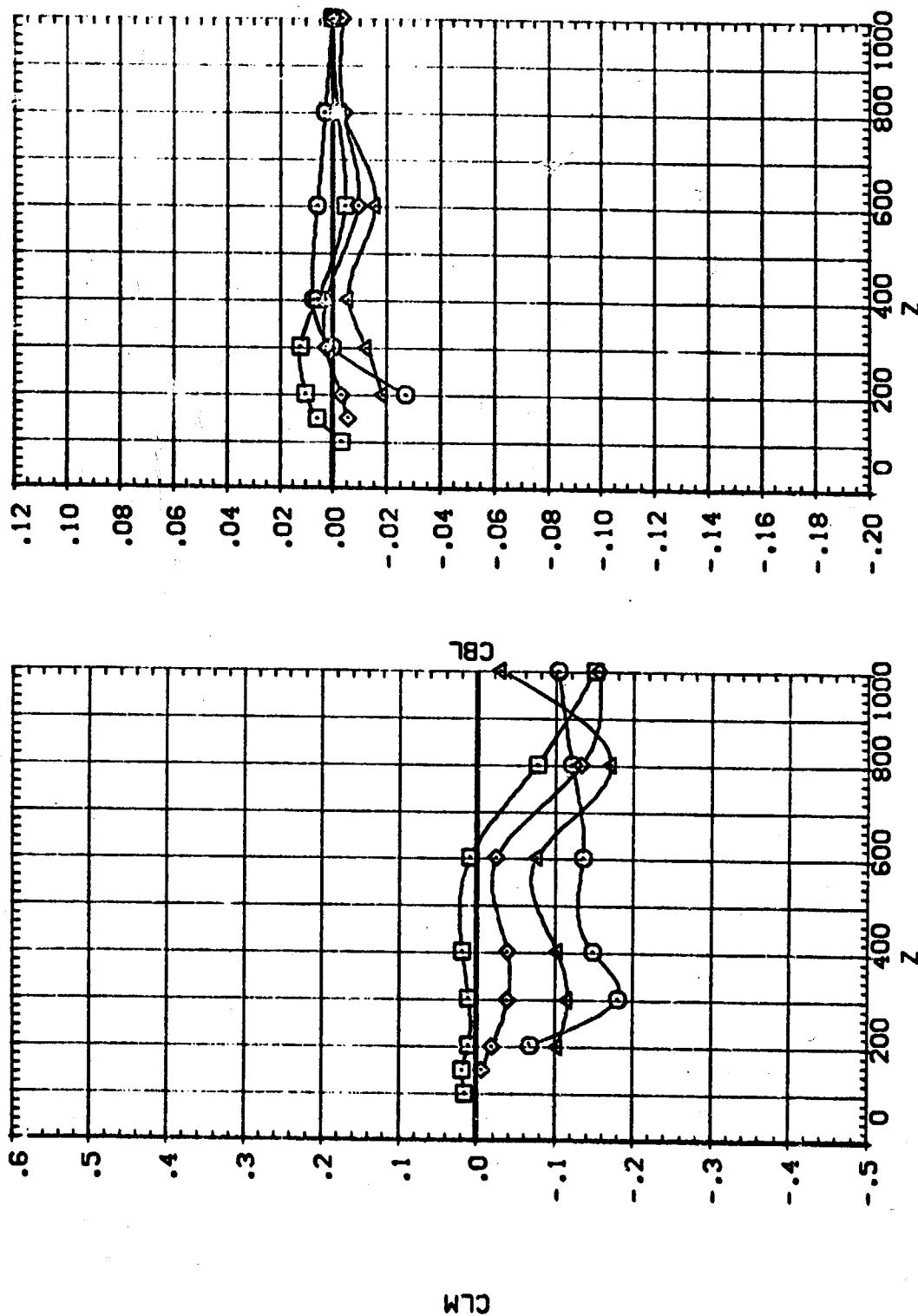
○
□
◇
△

X
300.590
600.550
900.660

PARAMETRIC VALUES
MACH 4.510
ALPHA .000
DALPHA -10.000
BETA .000
DBETA .000
PC+PR 1500.000

28.500
.000
.000
.000
.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

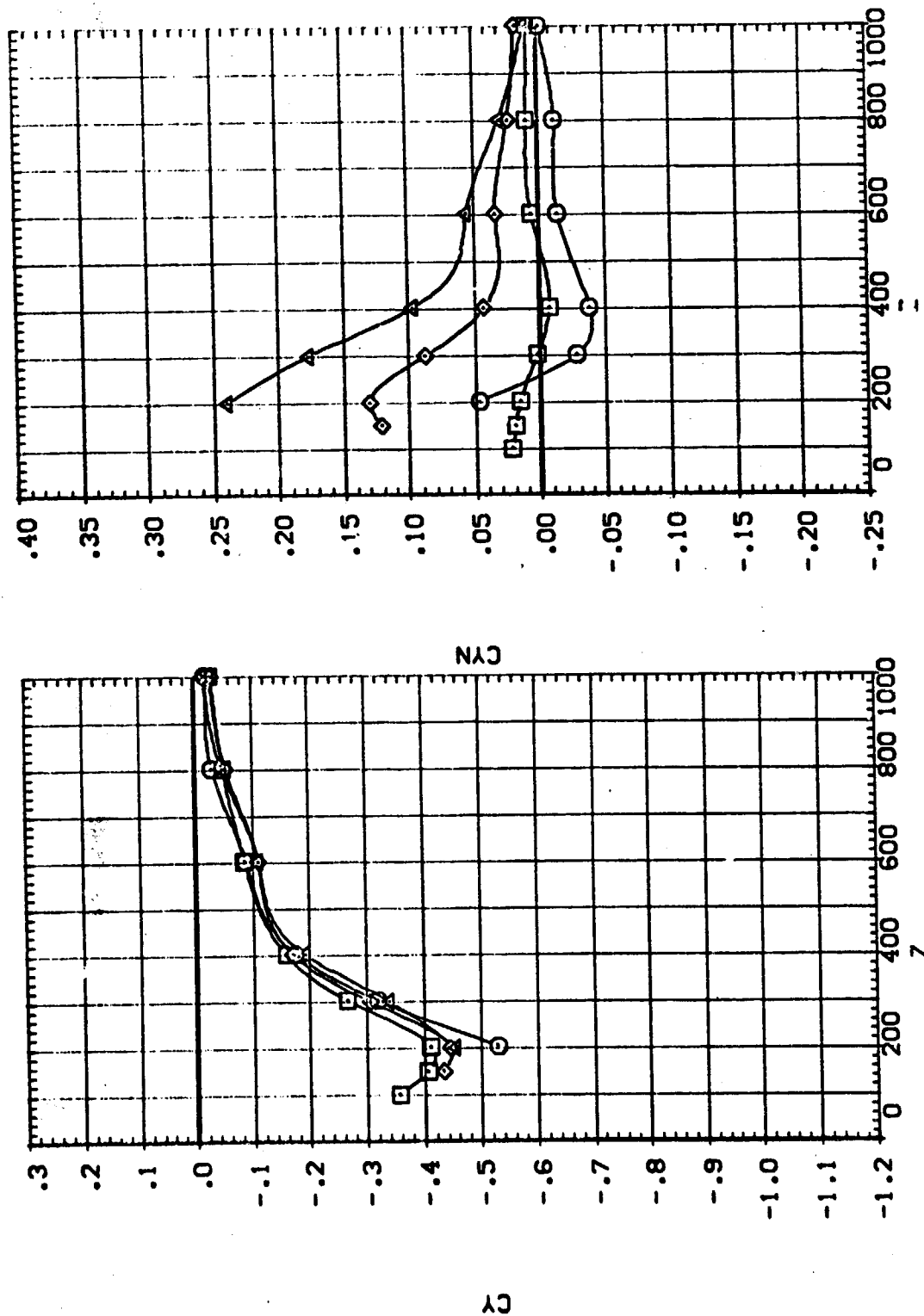


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ167)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBO | X | PARAMETRIC VALUES | | | |
|-------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| ○ | 300.590 | ALPHA | .000 | BETA | .000 |
| □ | 600.550 | DALPHA | -10.000 | DBETA | .000 |
| △ | 900.660 | Y | .000 | PC+PR | 1500.000 |



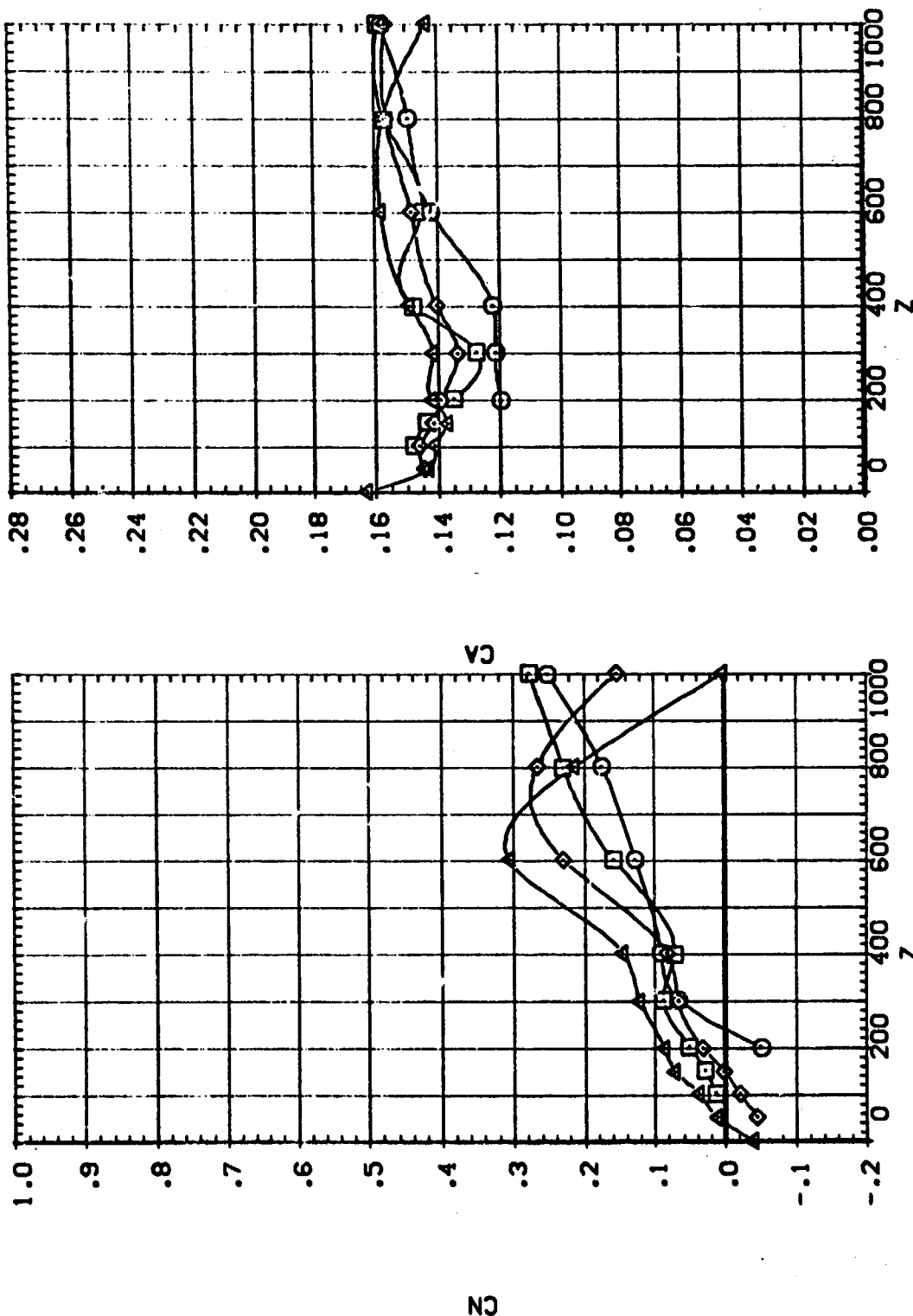
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| X | MACH | PTOTAL | 28.900 |
|---------|-------|---------|----------|
| 300.300 | ALPHA | .000 | .000 |
| 600.750 | BETA | -10.000 | .000 |
| 900.950 | Y | 200.000 | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

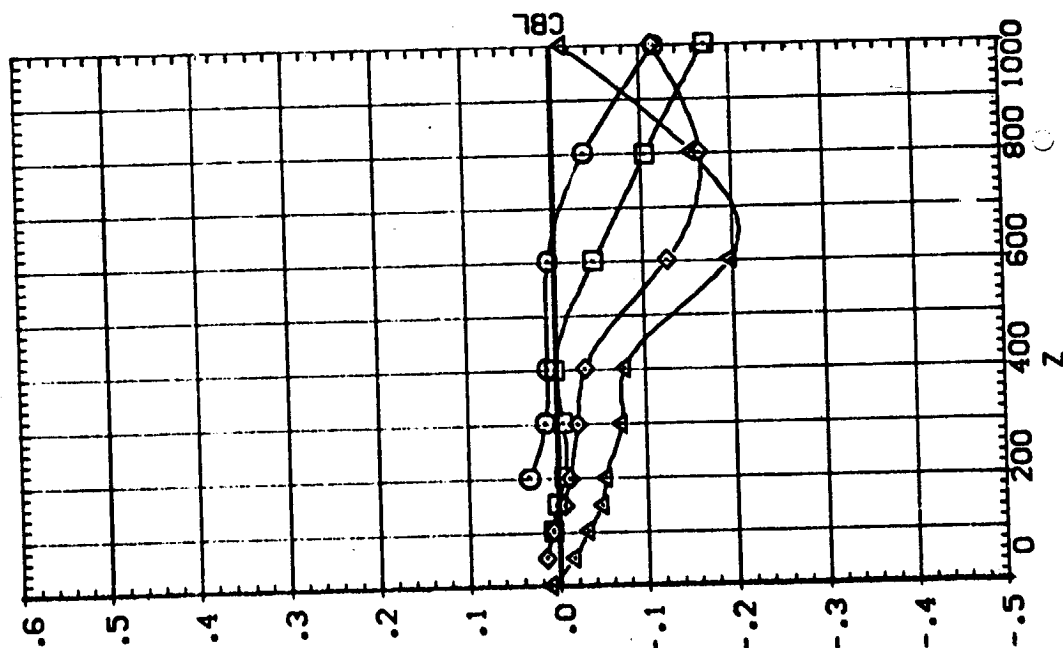
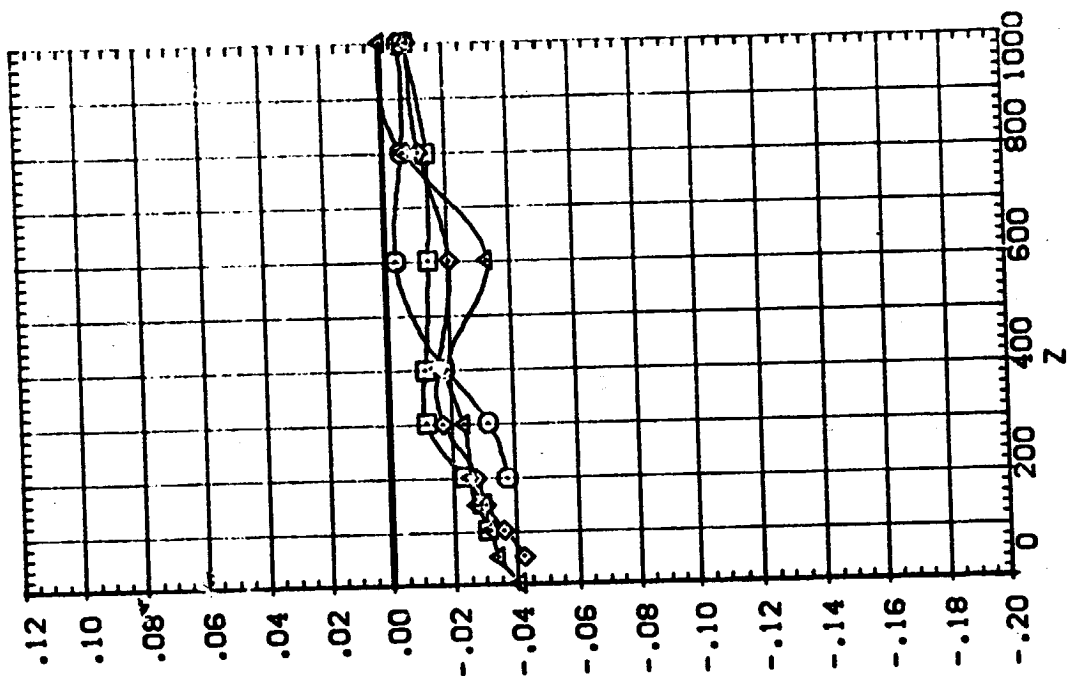


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ168)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|---------|----------|--|
| | | MACH | 4.510 | PITOTAL | 28.900 | |
| ○ | .323 | ALPHA | .000 | BETA | .000 | |
| □ | 300.300 | DALPHA | -10.000 | DBETA | .000 | |
| ◇ | 600.750 | Y | 200.000 | PC+R | 1500.000 | |
| △ | 900.950 | | | | | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ168)

SYMBOL

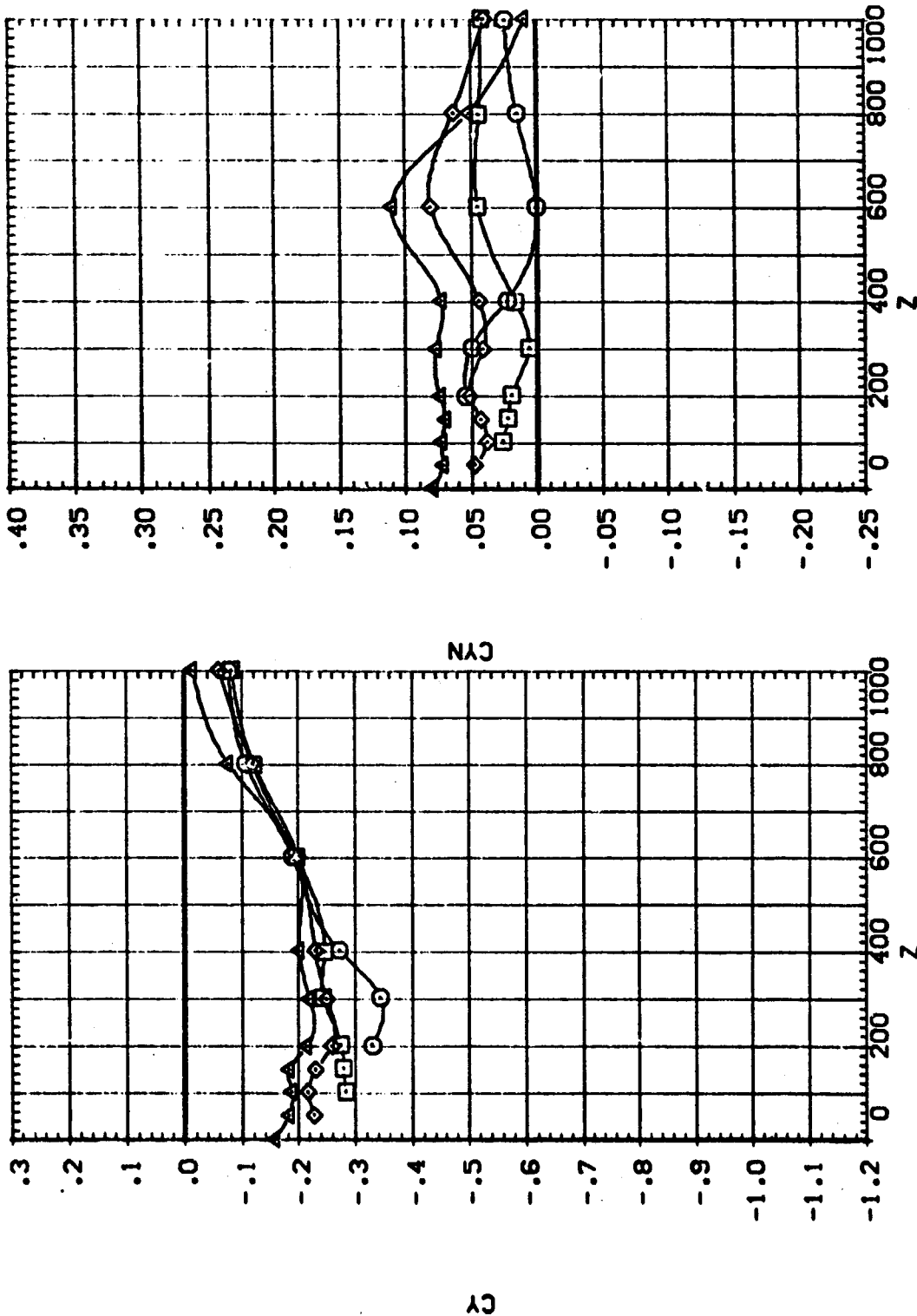
X

PARAMETRIC VALUES

| | | | | | |
|---------|---------|--------|---------|--------|----------|
| 300.300 | .323 | MACH | 4.510 | PTOTAL | 28.900 |
| 600.750 | .000 | ALPHA | .000 | BETA | .000 |
| 900.950 | -10.000 | DALPHA | 200.000 | PC-MR | 1500.000 |
| | | Y | | | |

○ □ ◇ △

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

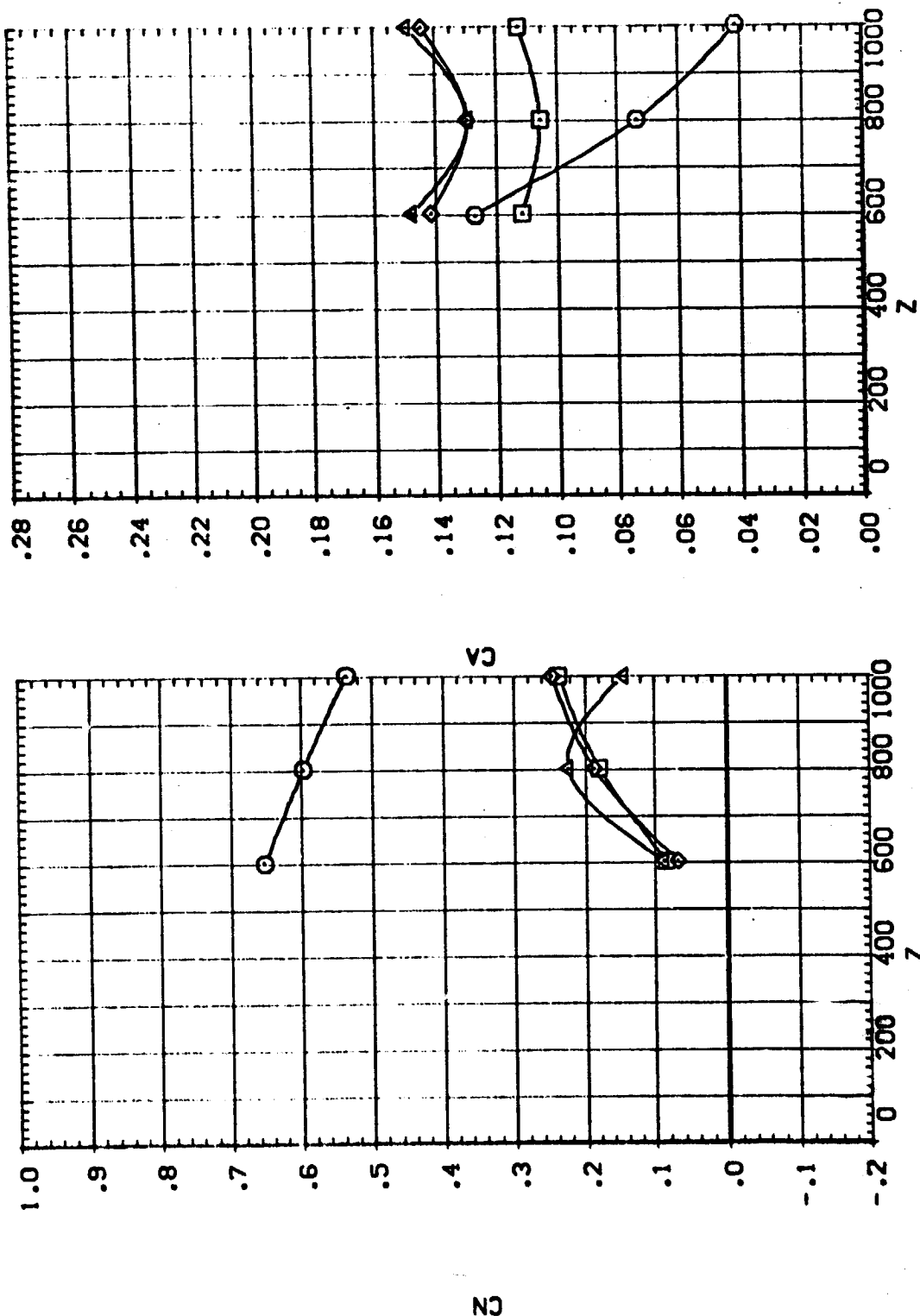


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ169)

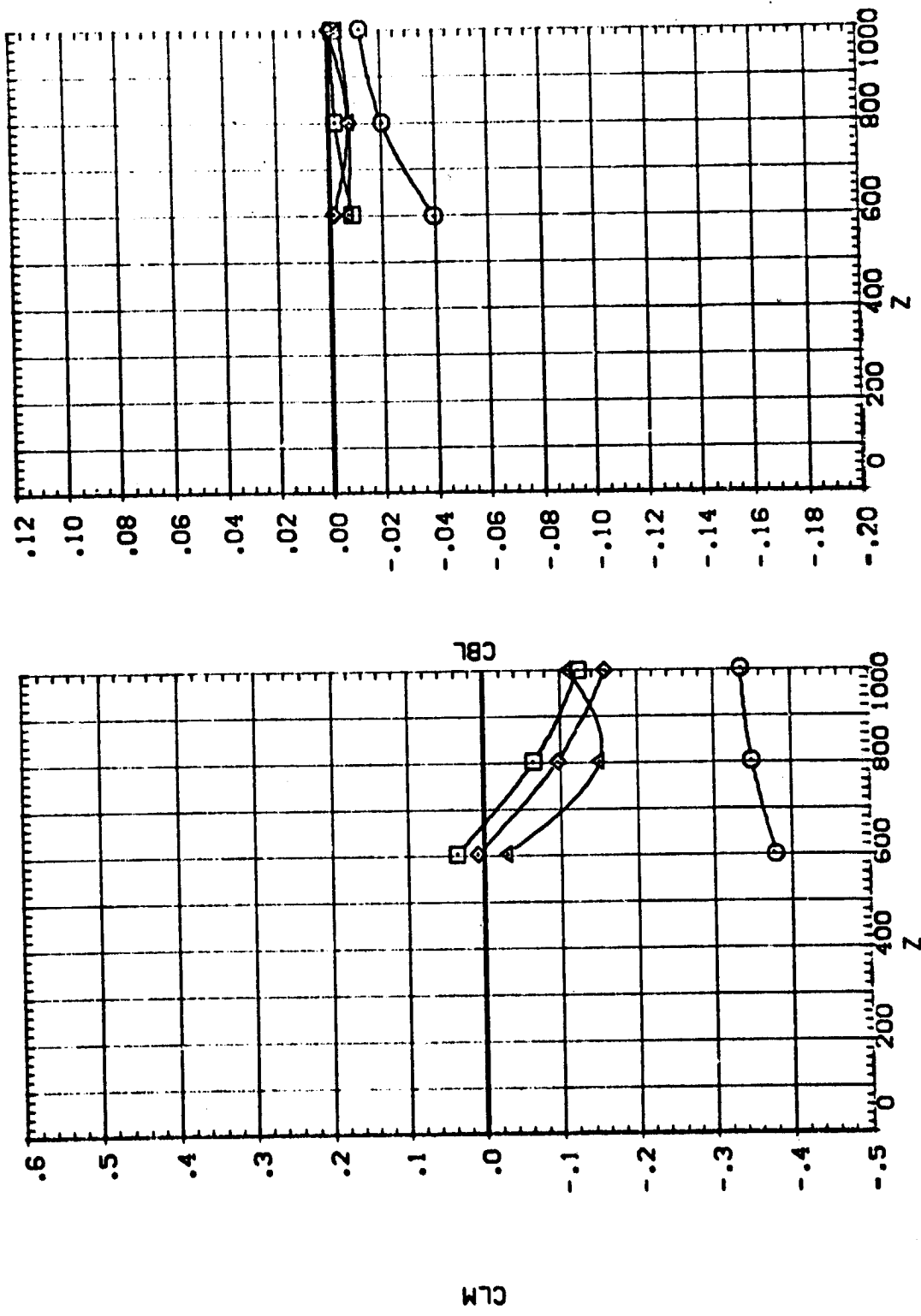
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | P10TAL | 28.900 | |
| ○ | 300.050 | ALPHA | .000 | BETA | .000 | |
| □ | 600.300 | DALPHA | -20.000 | DBETA | .000 | |
| ◇ | 900.870 | Y | .000 | PC-MER | 1500.000 | |



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYM-BOL | X | PARAMETRIC VALUES | | | | |
|---------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | PTOTAL | 28.900 | |
| ○ | 300.050 | ALPHA | .000 | BETA | .000 | |
| □ | 600.300 | DALPHA | -20.000 | DBETA | .000 | |
| ◇ | 900.670 | Y | .000 | POWER | 1500.000 | |

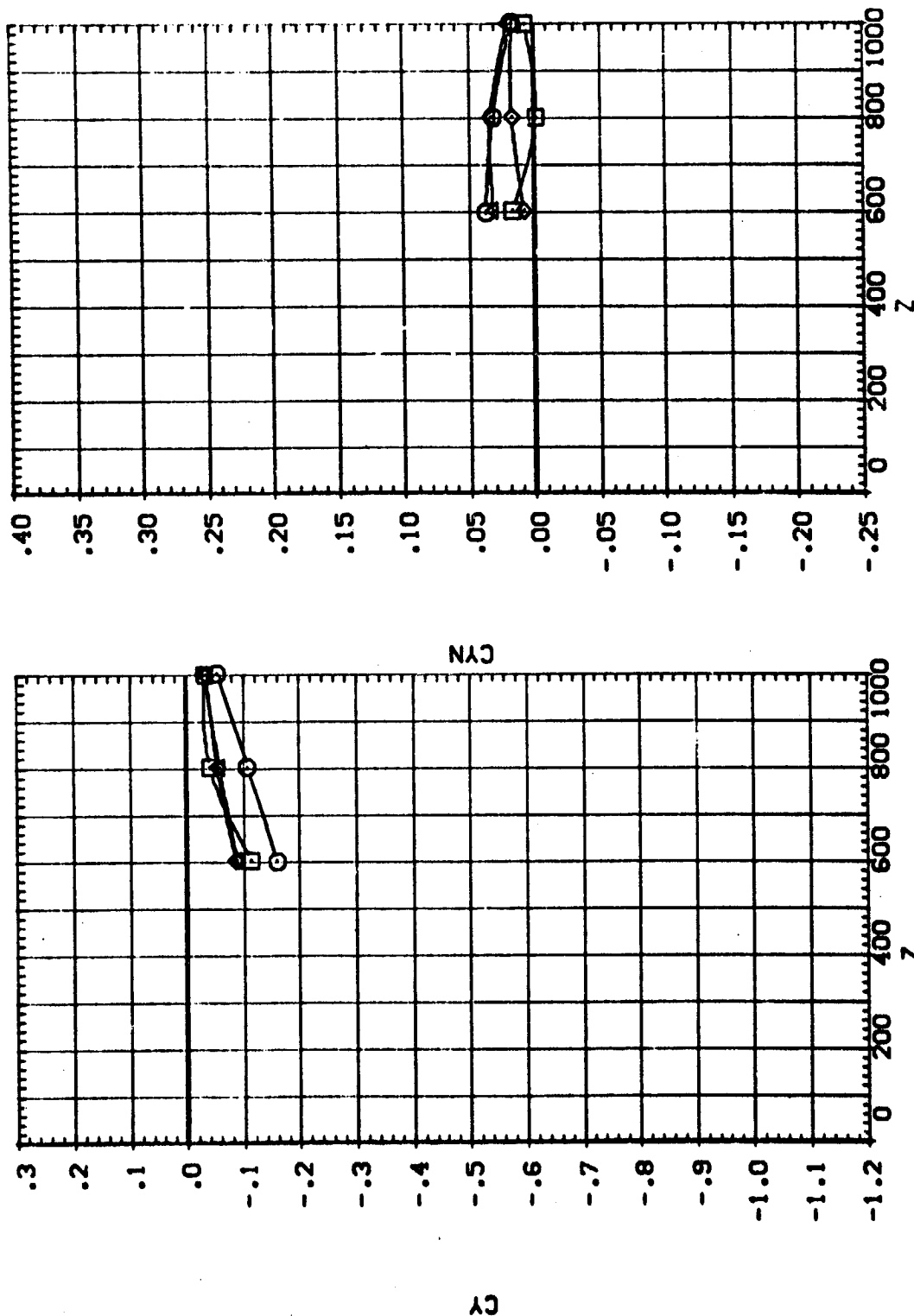


EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ169)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| | | | | | |
|--------|---------|-------------------|---------|--------|----------|
| SYMBOL | X | PARAMETRIC VALUES | | | |
| | | MACH | 4.510 | PTOTAL | 28.900 |
| | 300.050 | ALPHA | .000 | BETA | .000 |
| | 600.300 | DALPHA | -20.000 | DBETA | .000 |
| | 900.870 | Y | .000 | PC-HR | 1500.000 |



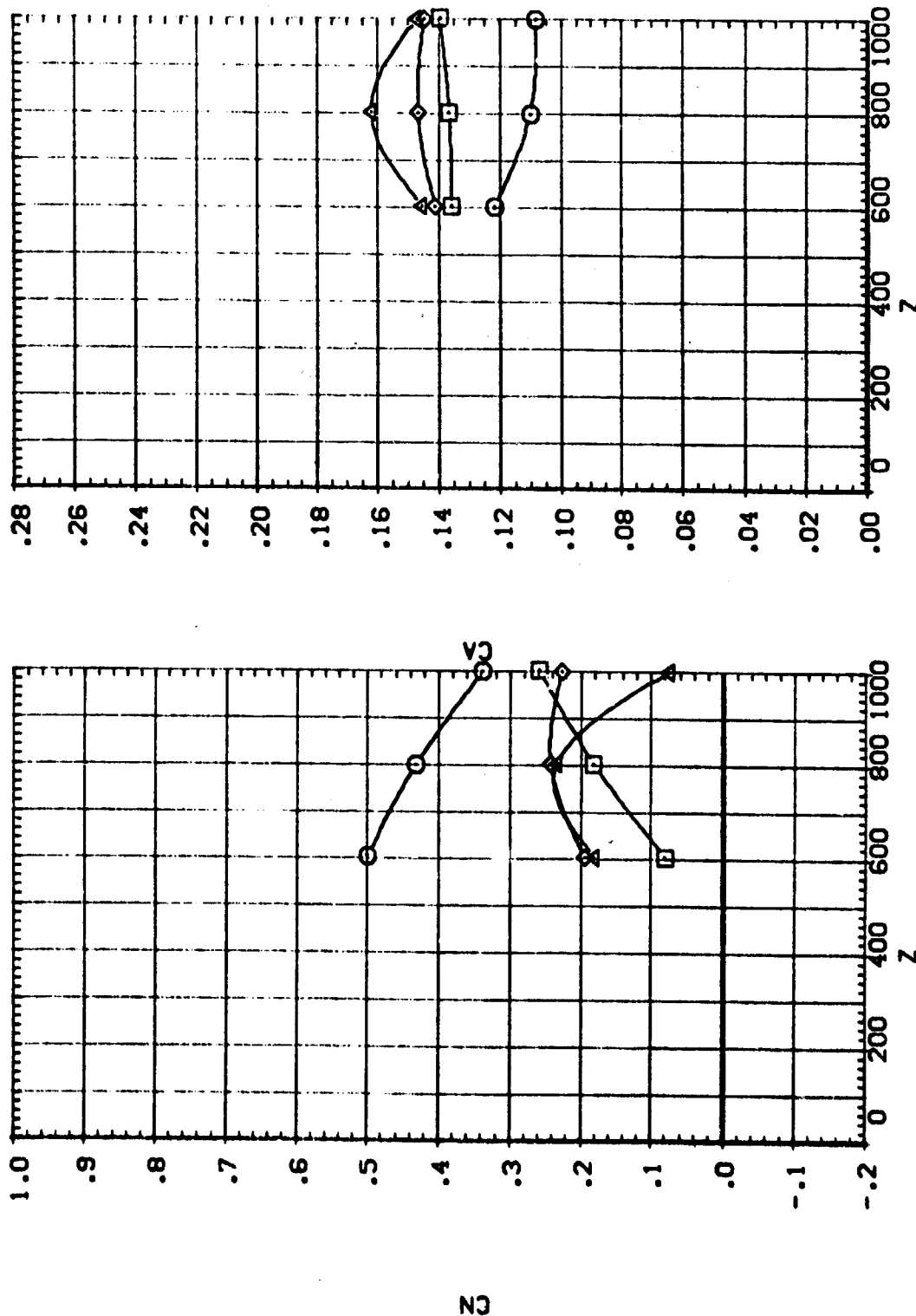
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| X | MACH | PIOTAL | BETA | DETA | PC-MBR |
|---------|---------|---------|----------|------|--------|
| 300.340 | 4.510 | 28.900 | .000 | .000 | |
| 600.720 | .000 | .000 | .000 | .000 | |
| 900.430 | -20.000 | 200.000 | 1500.000 | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

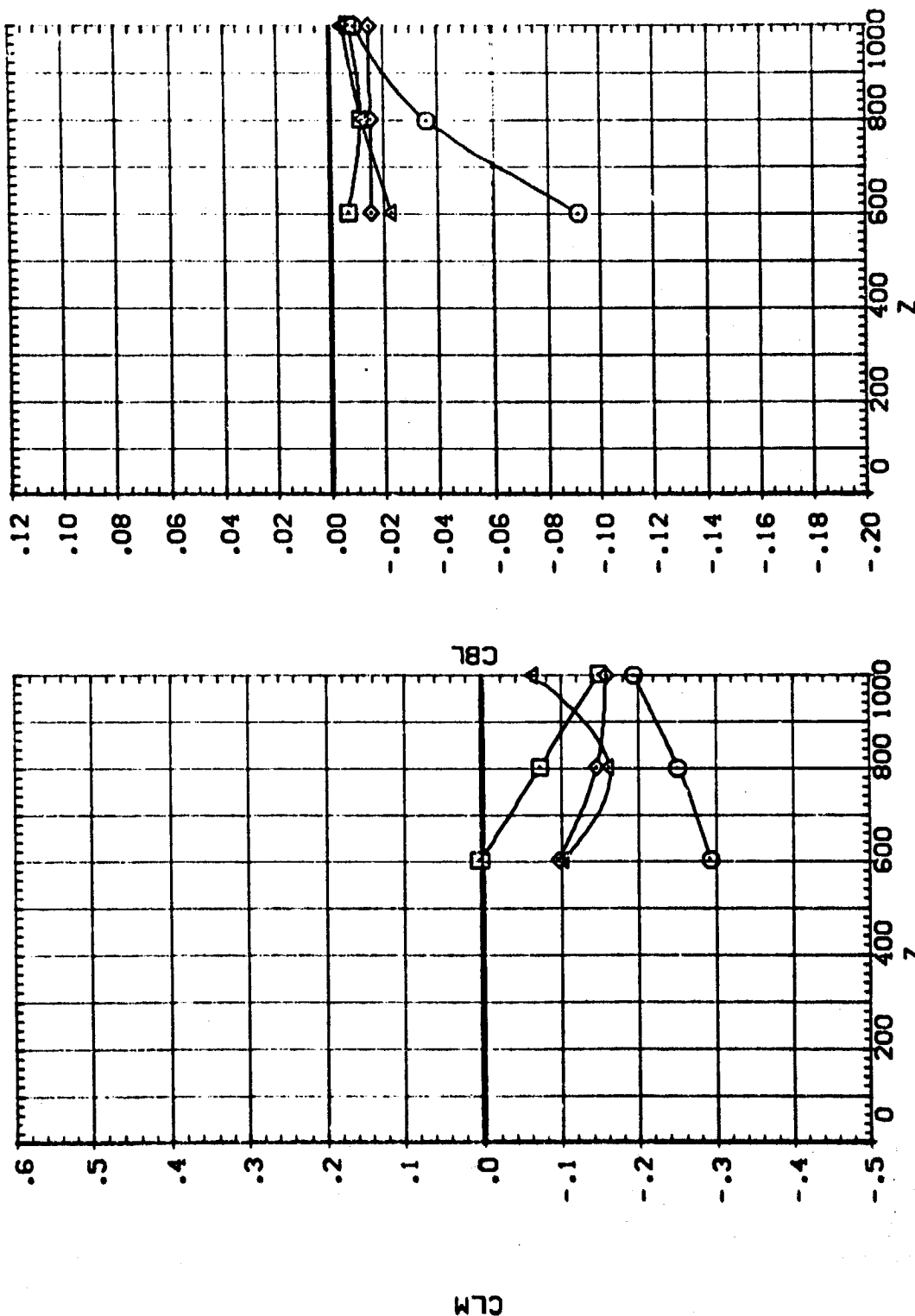


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ170)

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|-------|----------|
| | | MACH | 4.510 | POTAL | 28.900 |
| ○ | 300.340 | ALPHA | .000 | BETA | .000 |
| □ | 600.720 | DALPHA | -20.000 | DBETA | .000 |
| ◇ | 900.430 | Y | 200.000 | PC-HR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

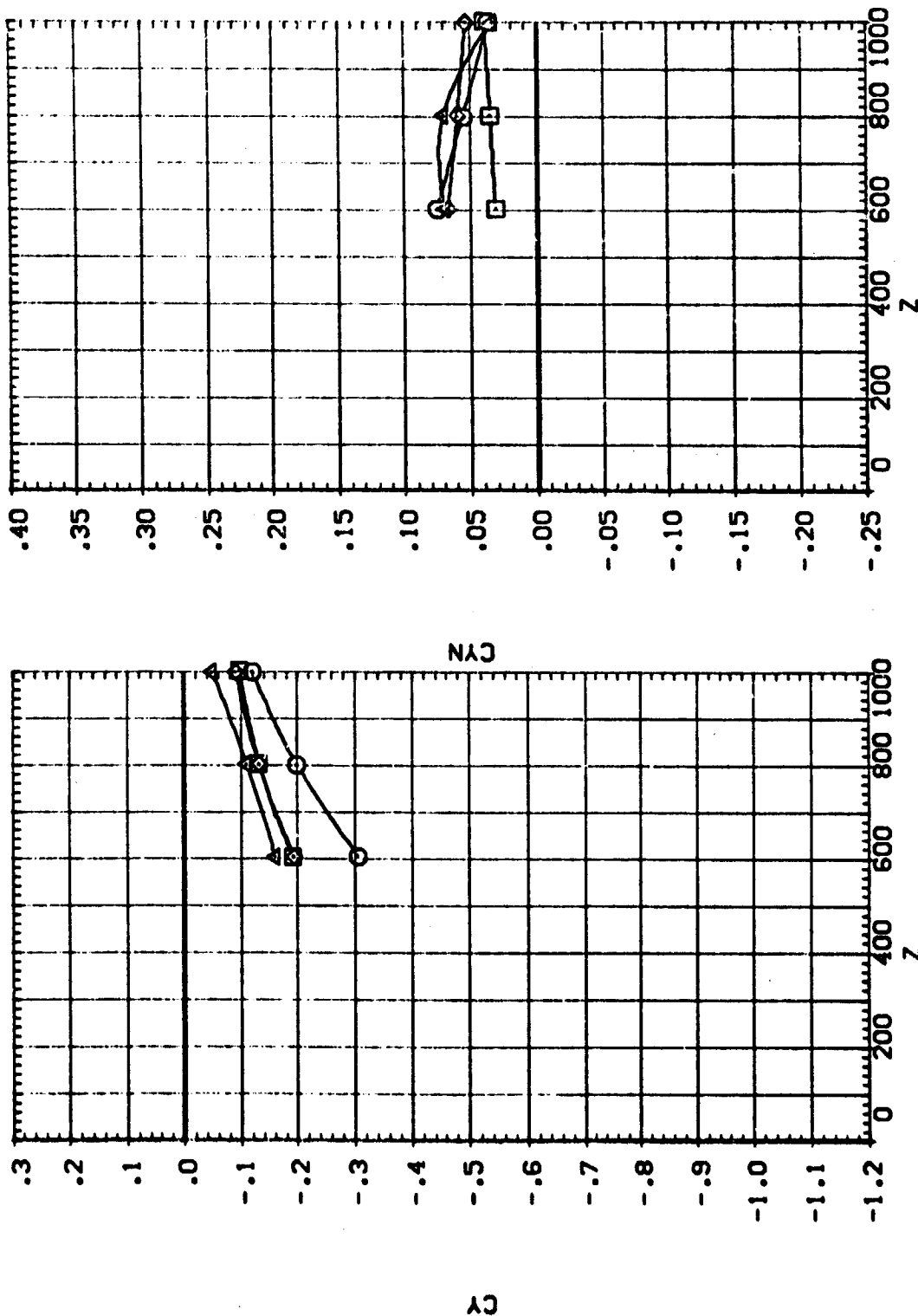


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X
 ○ 300.340
 □ 600.720
 ◇ 900.430

PARAMETRIC VALUES
 MACH 4.510 PTOTAL 28.900
 ALPHA .000 BETA .000
 DALPHA -20.000 DBETA .000
 Y 200.000 PC46R 1500.000



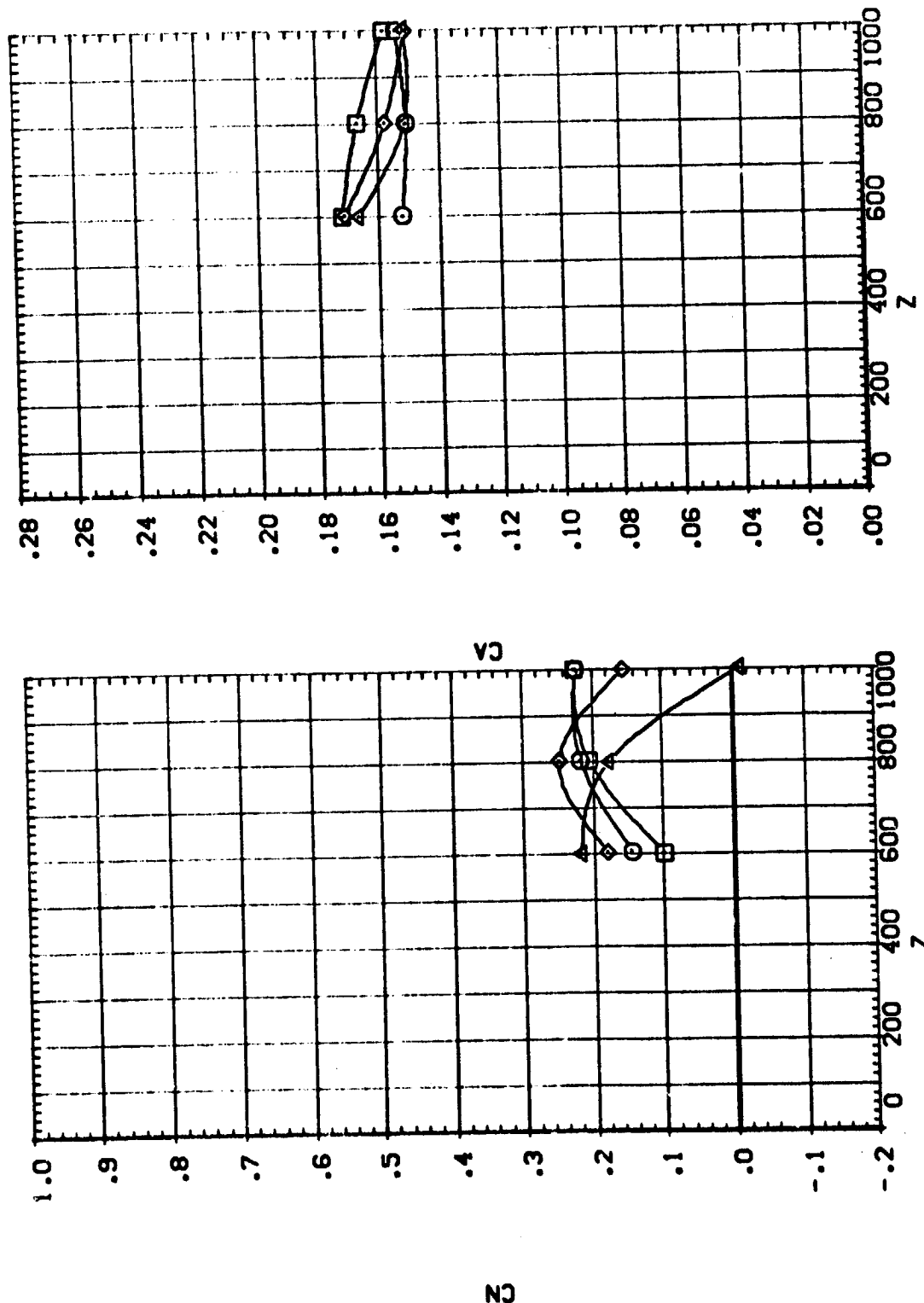
EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ171)

SYMBOL X MACH ALPHA DIALPHA Y
 300.350
 600.540
 900.750

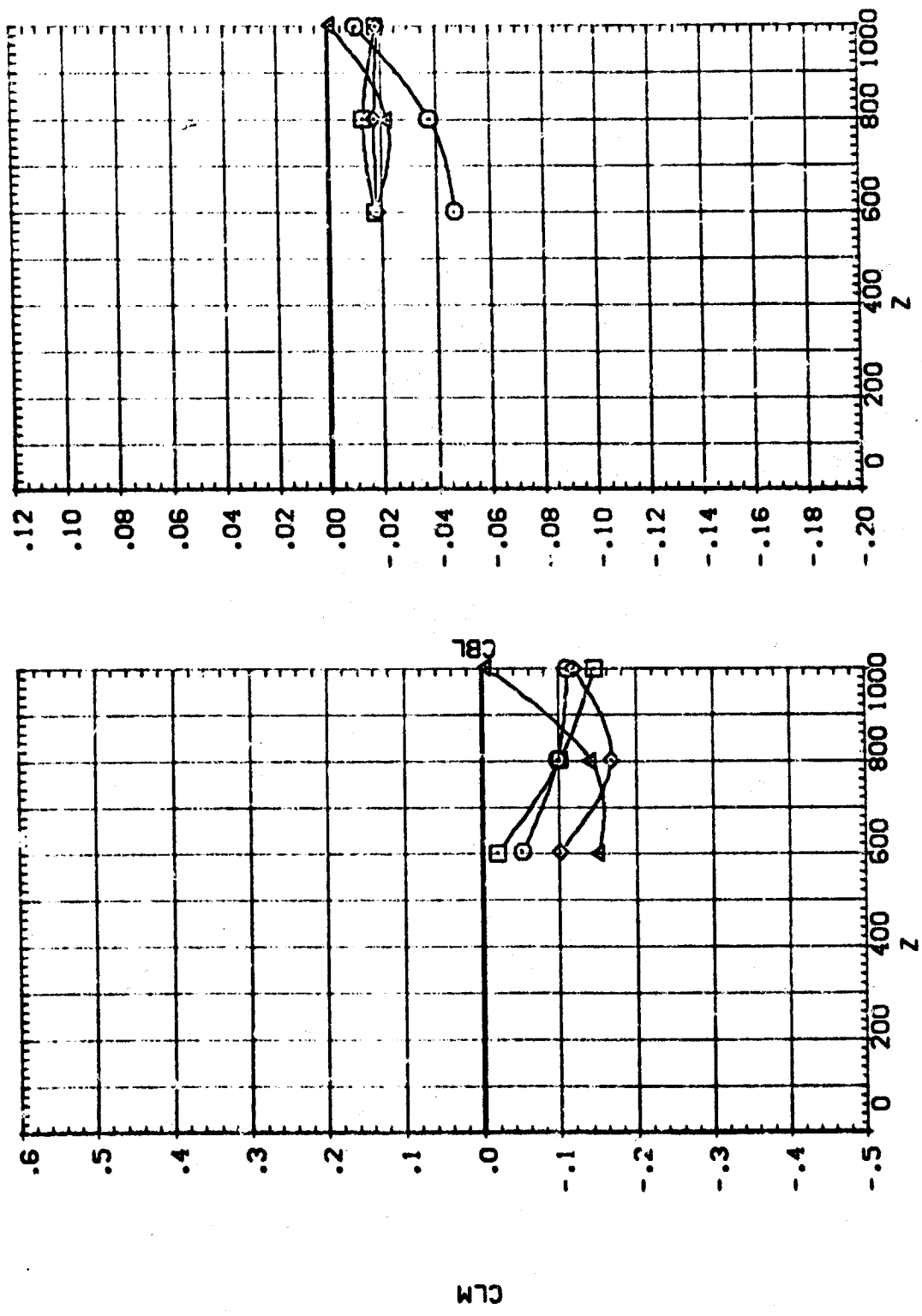
PARAMETRIC VALUES
 4.510 TOTAL 28.900
 .000 BETA .000
 -20.000 DBETA .000
 400.000 PC-MBR 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATA SETS



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA SETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|--------|
| | | MACH | PTOTAL | BETA | PC-MER |
| ○ | .202 | 4.510 | 28.900 | .000 | .000 |
| □ | 300.350 | .000 | .000 | .000 | .000 |
| ◇ | 600.540 | -20.000 | .000 | .000 | .000 |
| △ | 900.750 | 400.000 | 1500.000 | .000 | .000 |

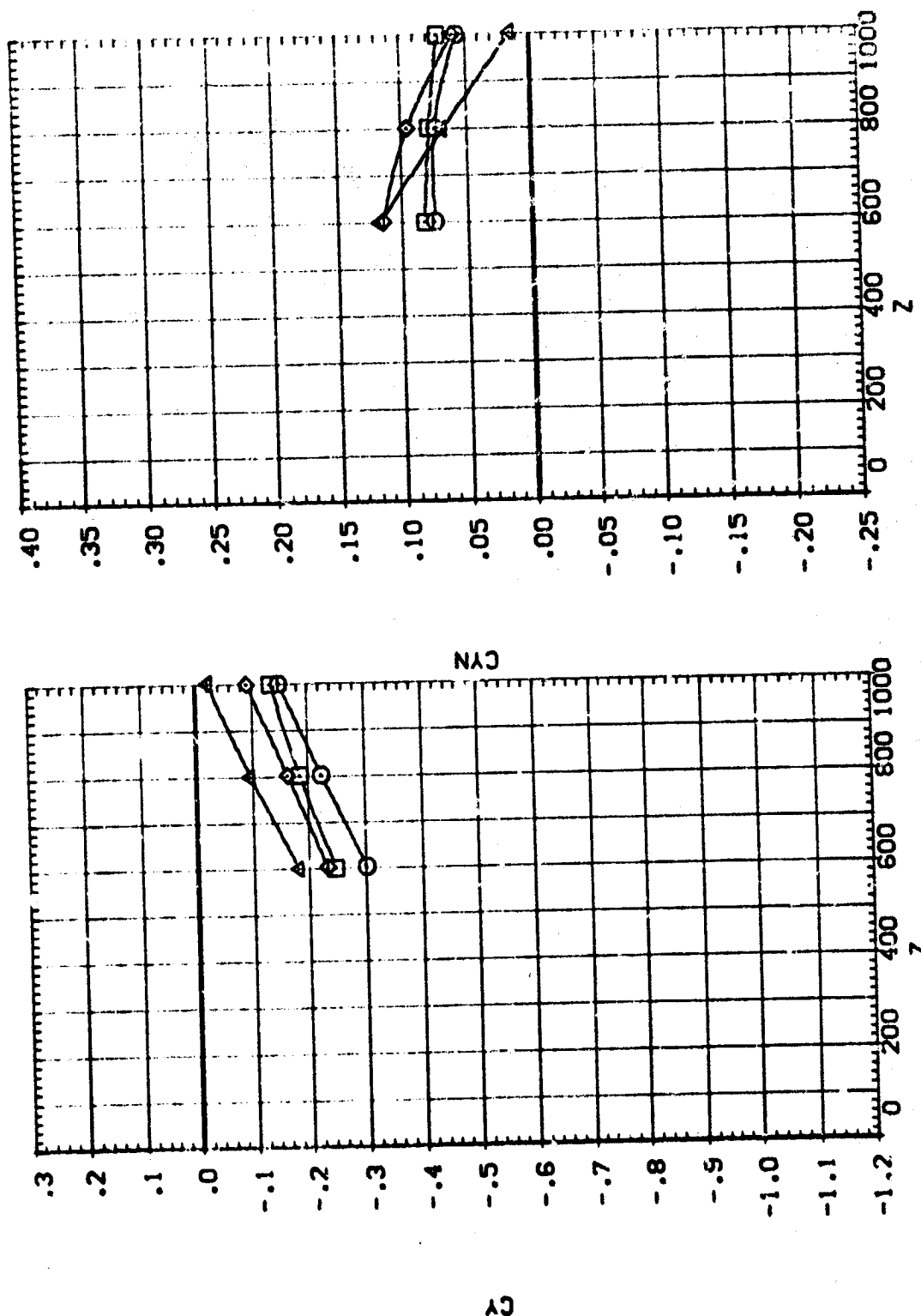


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ171)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|----------|
| | | MACH | 4.510 | P TOTAL | 28.900 |
| ○ | 300.350 | ALPHA | .000 | BETA | .000 |
| □ | 600.540 | DALPHA | -20.000 | LBETA | .000 |
| ◇ | 900.750 | Y | 400.000 | CHGR | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ172)

SYMBOL

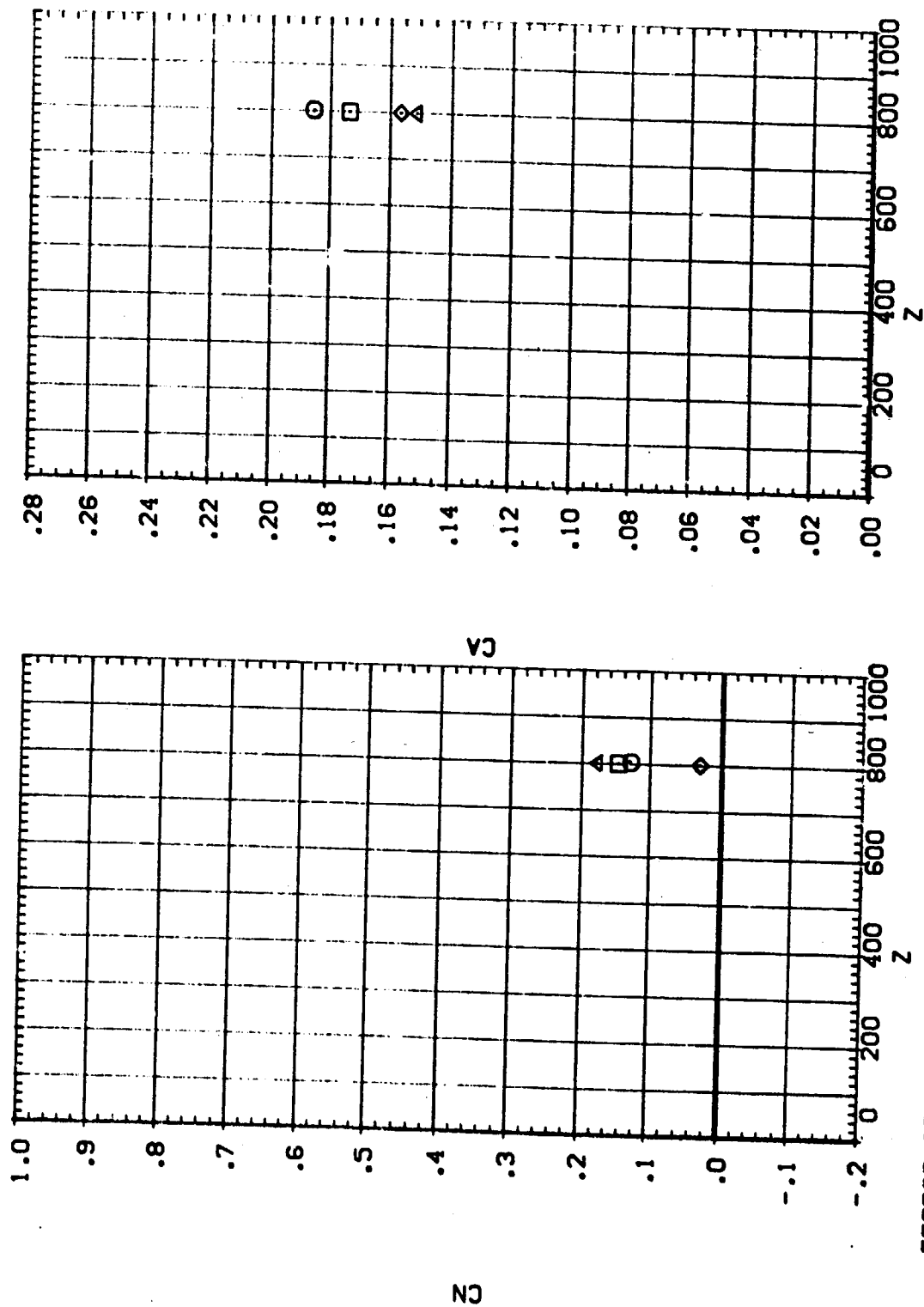
X

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | 28.500 |
|---------|--------|---------|----------|
| 300.300 | ALPHA | .000 | BETA |
| 600.510 | DALPHA | -20.000 | DBETA |
| 900.660 | Y | 800.000 | PC-MBR |
| | | | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ172)

SYMBOL

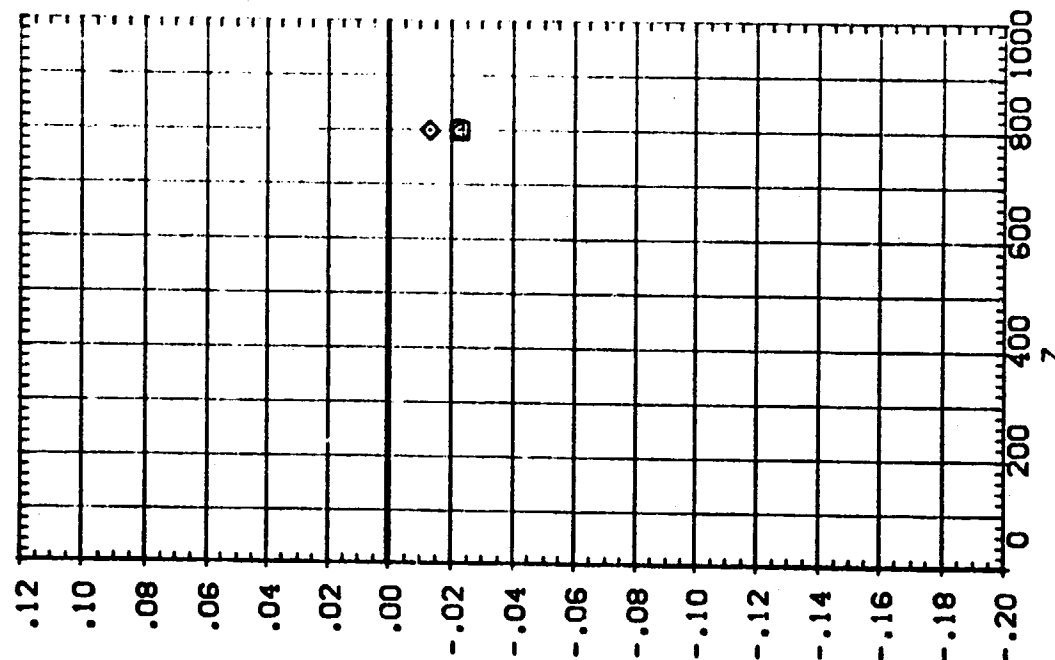
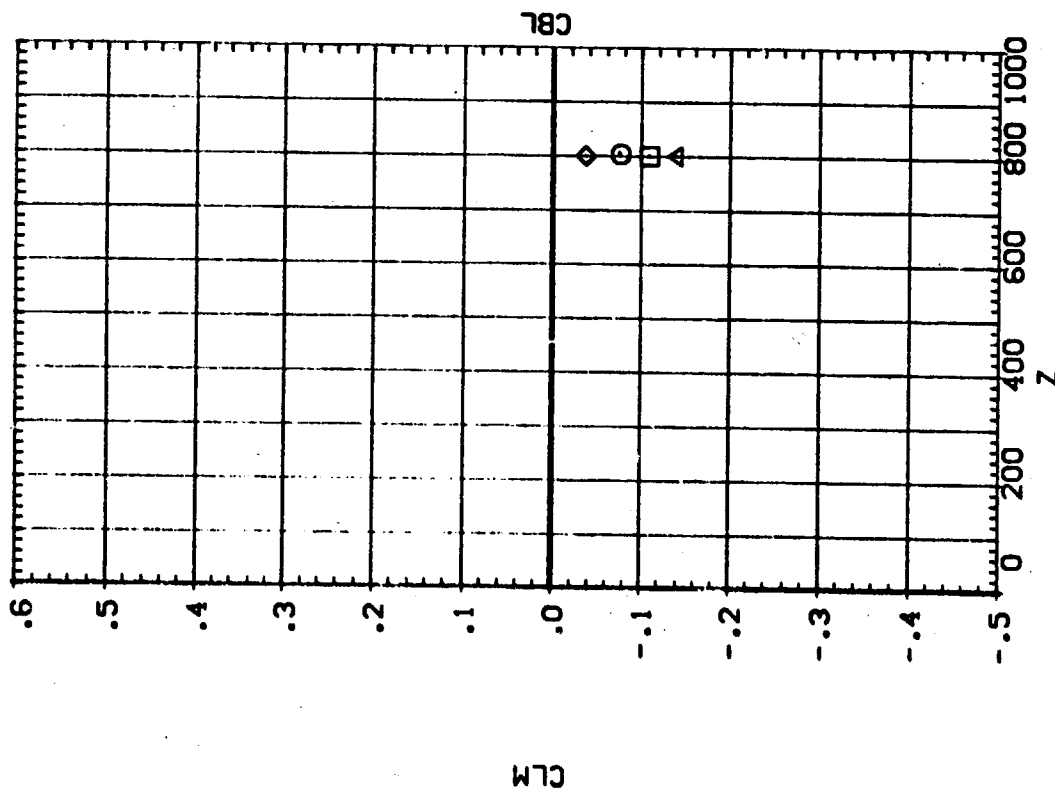
X

○ □ ◇ △

PARAMETRIC VALUES

| MACH | PTOTAL | 28.900 |
|---------|---------|----------|
| 300.300 | .000 | .000 |
| 600.510 | -20.000 | .000 |
| 900.660 | 800.000 | 1520.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

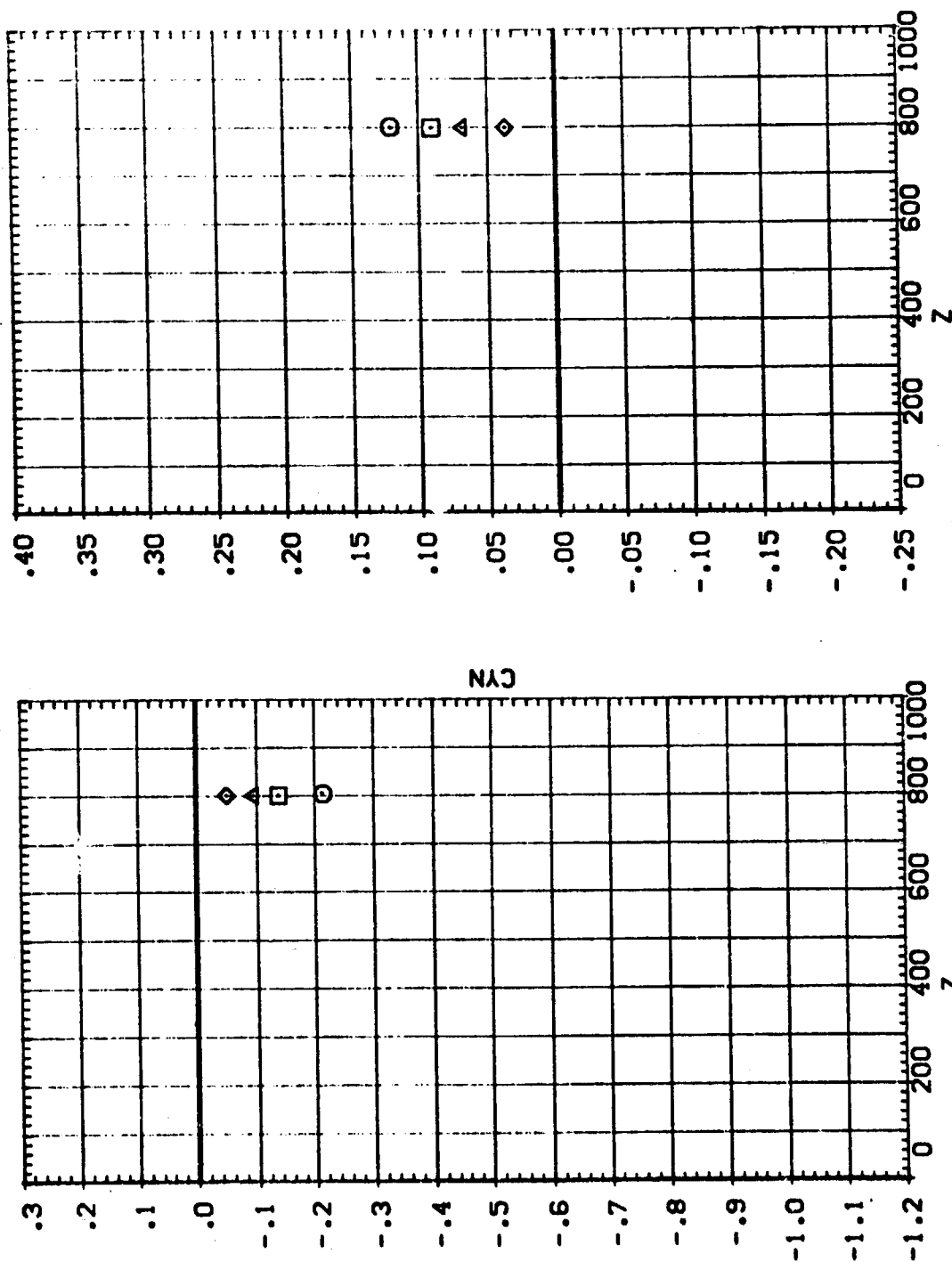


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RIJ172)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|---------|---------|--------|
| | | MACH | ALPHA | DALPHA | Y | PTOTAL |
| ○ | -0.819 | 4.510 | 0.000 | -20.000 | 800.000 | 20.900 |
| □ | 300.300 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| ◇ | 600.510 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| △ | 900.660 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |



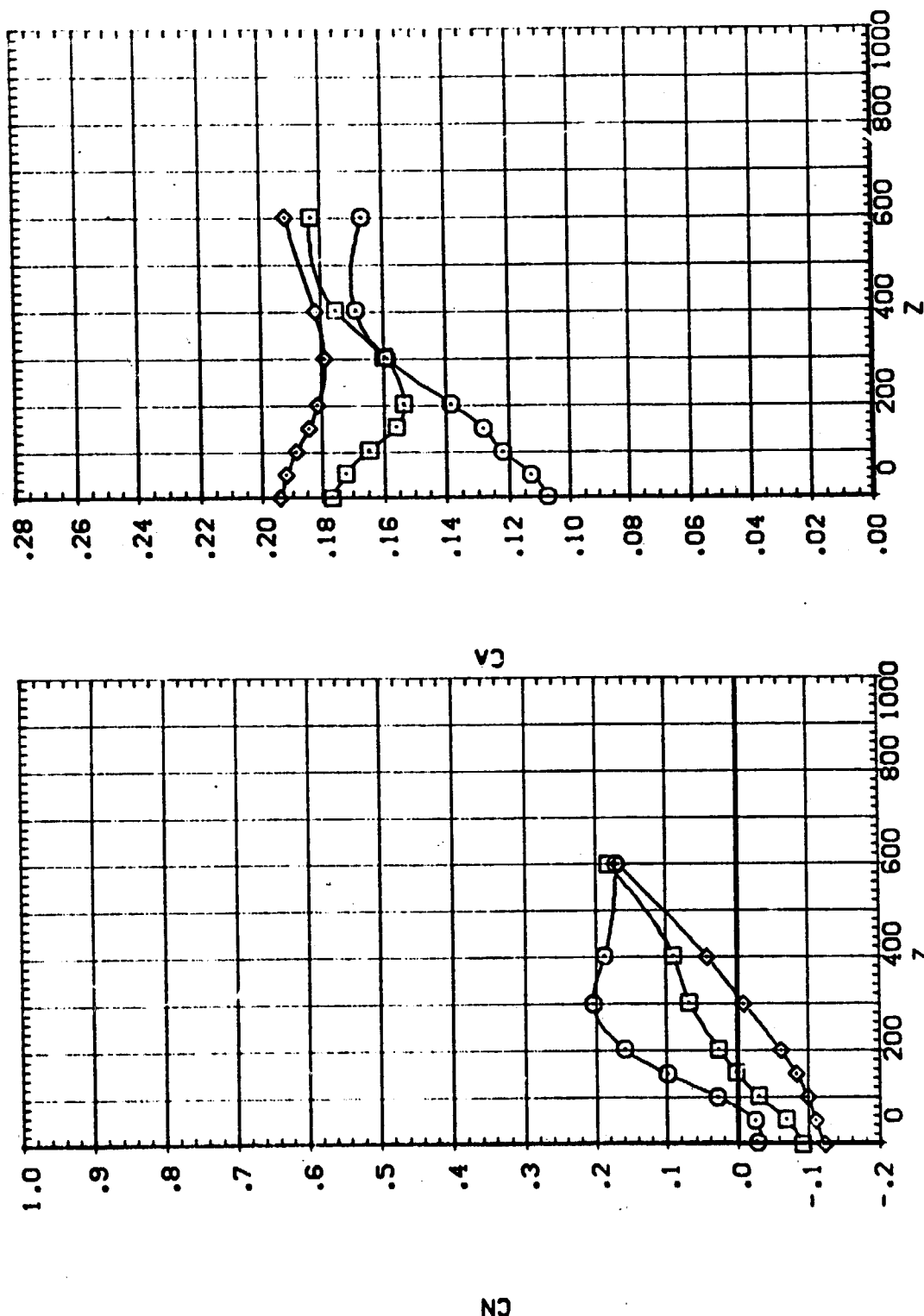
EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ232)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| PARAMETRIC VALUES | | |
|-------------------|--------|----------|
| Y | MACH | 28.900 |
| | ALPHA | 5.000 |
| | DALPHA | 5.000 |
| | BETA | 5.000 |
| | DBETA | 5.000 |
| | PC+PB | 1500.000 |

SYMBOL
 O
 □
 ◇



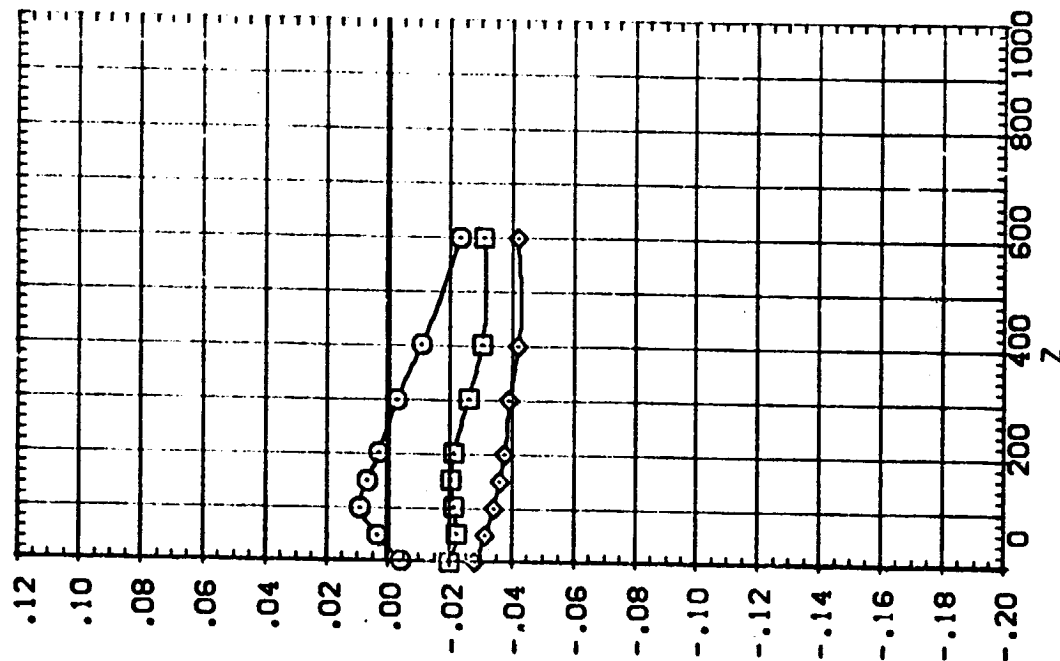
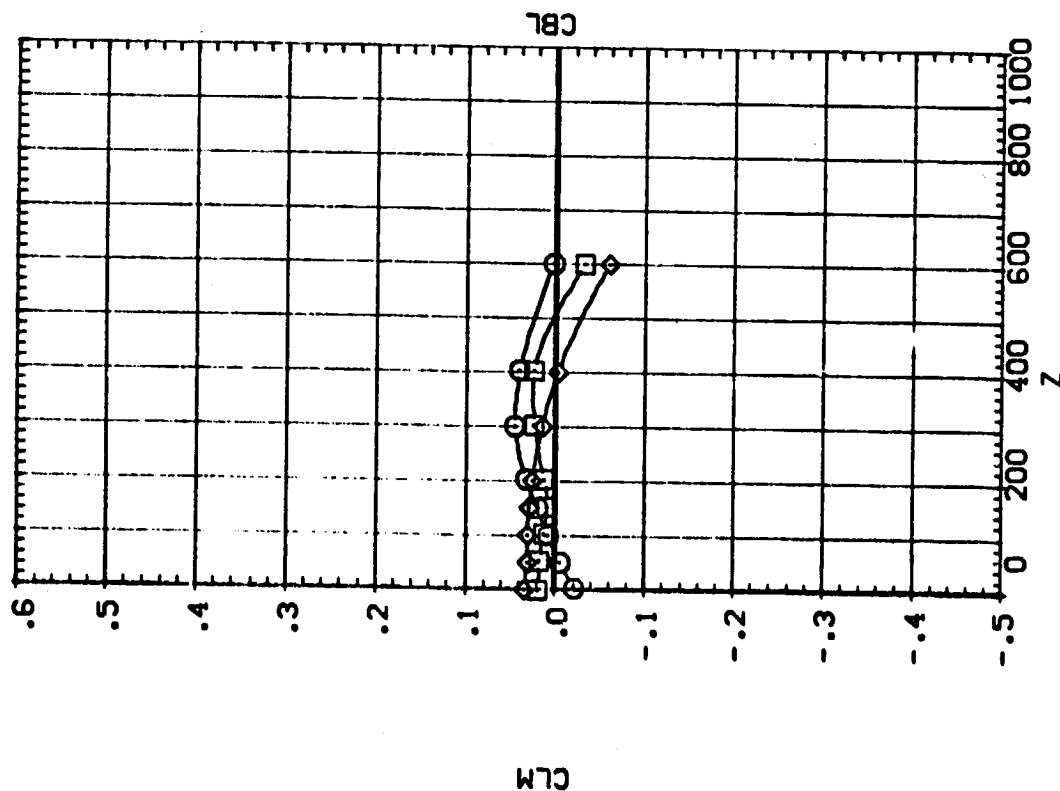
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ232)

SYMBOL

Y
○
□
◇

PARAMETRIC VALUES
MACH 4.510 PTOTL 28.900
ALPHA .000 BETA 5.000
DALPHA 5.000 DBETA 5.000
X .000 PC-HB 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

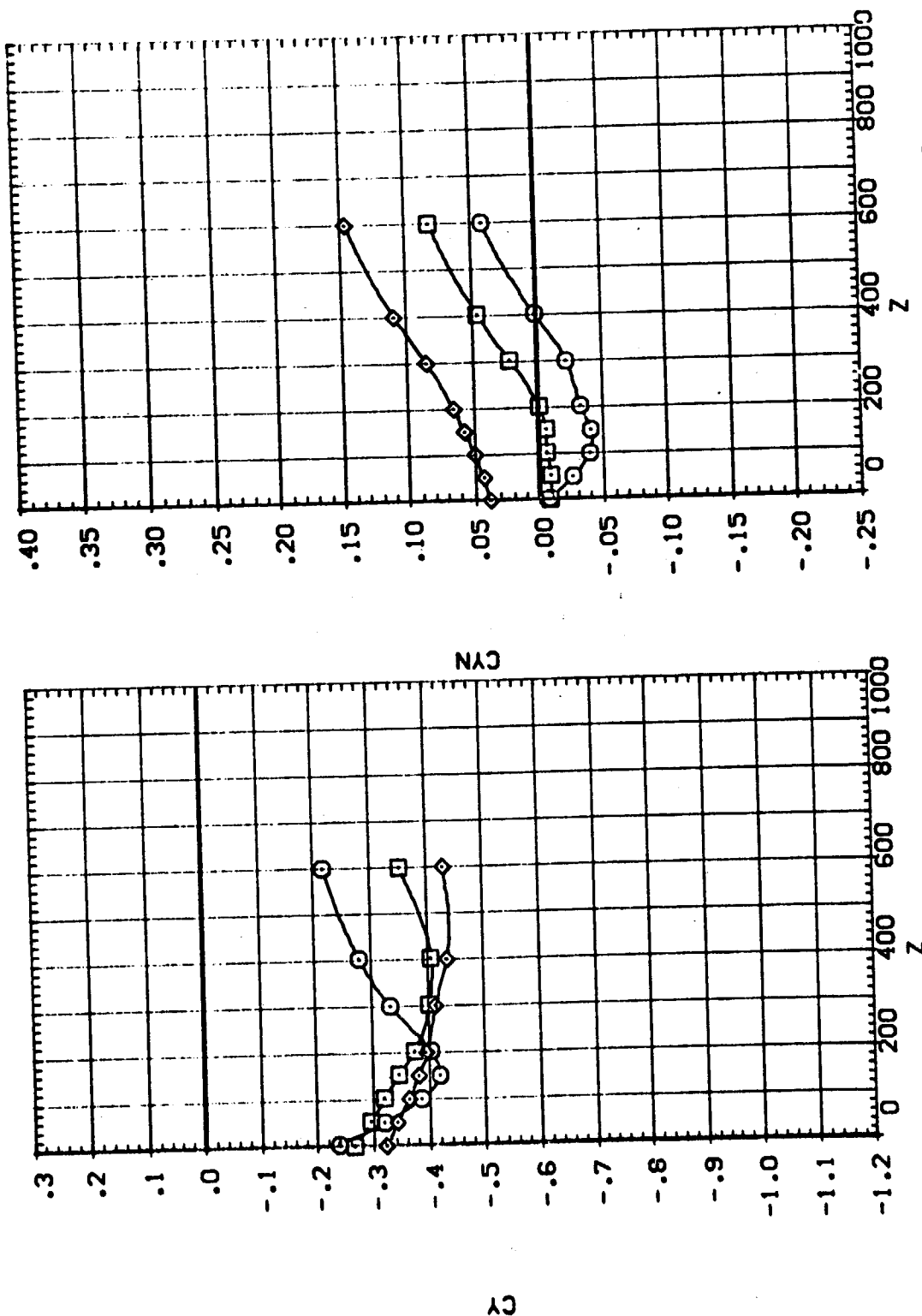


EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ232)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|-------|----------|
| | | MACH | PTOTL | BETA | PC-MB |
| ○ | -212 | 4.510 | 28.900 | 5.000 | 5.000 |
| □ | 201.850 | .000 | 5.000 | 5.000 | 5.000 |
| ◇ | 400.180 | .000 | 5.000 | 5.000 | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ233)

SYMBOL

○ □ ◇

Y

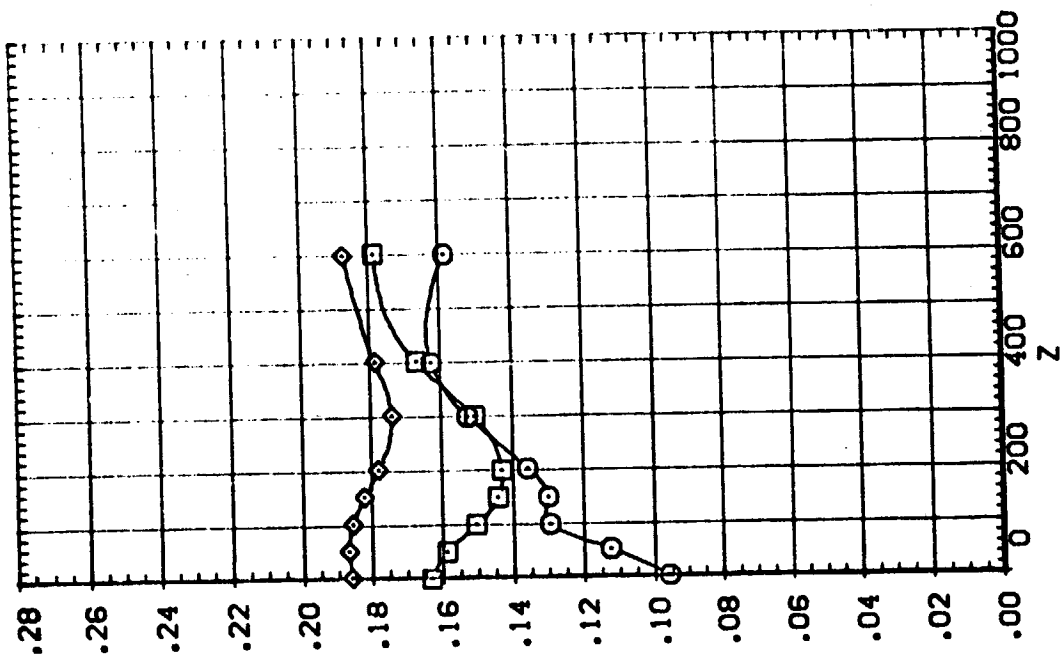
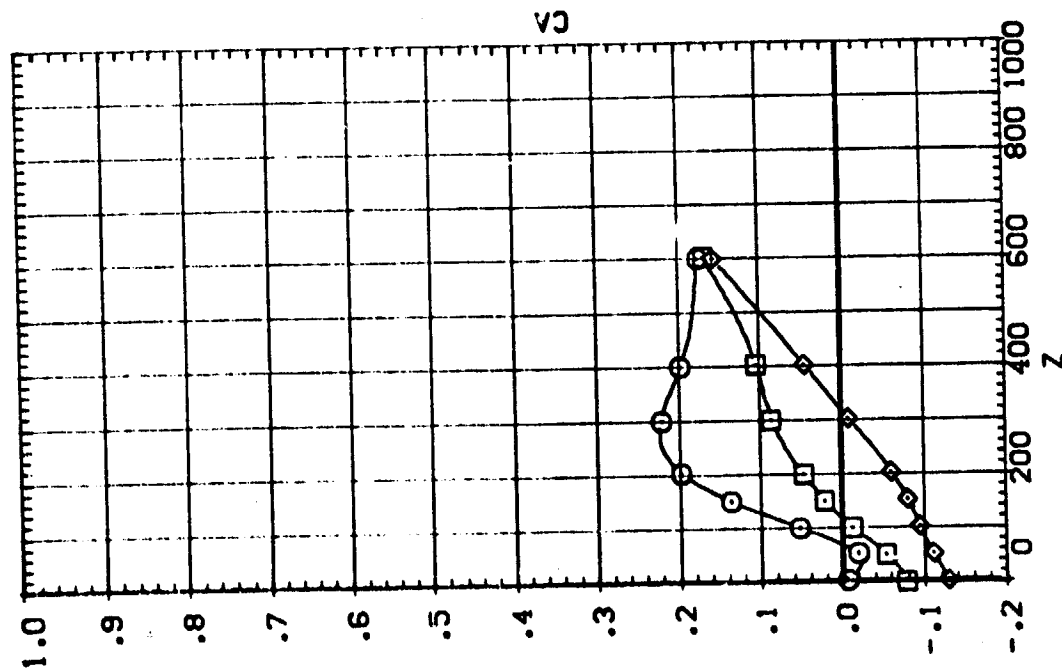
.415
199.680
402.690

MACH
ALPHA
DALPHA
X

PARAMETRIC VALUES

4.510 PTOTL 28.900
.000 BETA 5.000
5.000 DBETA .000
.000 PC+P8 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

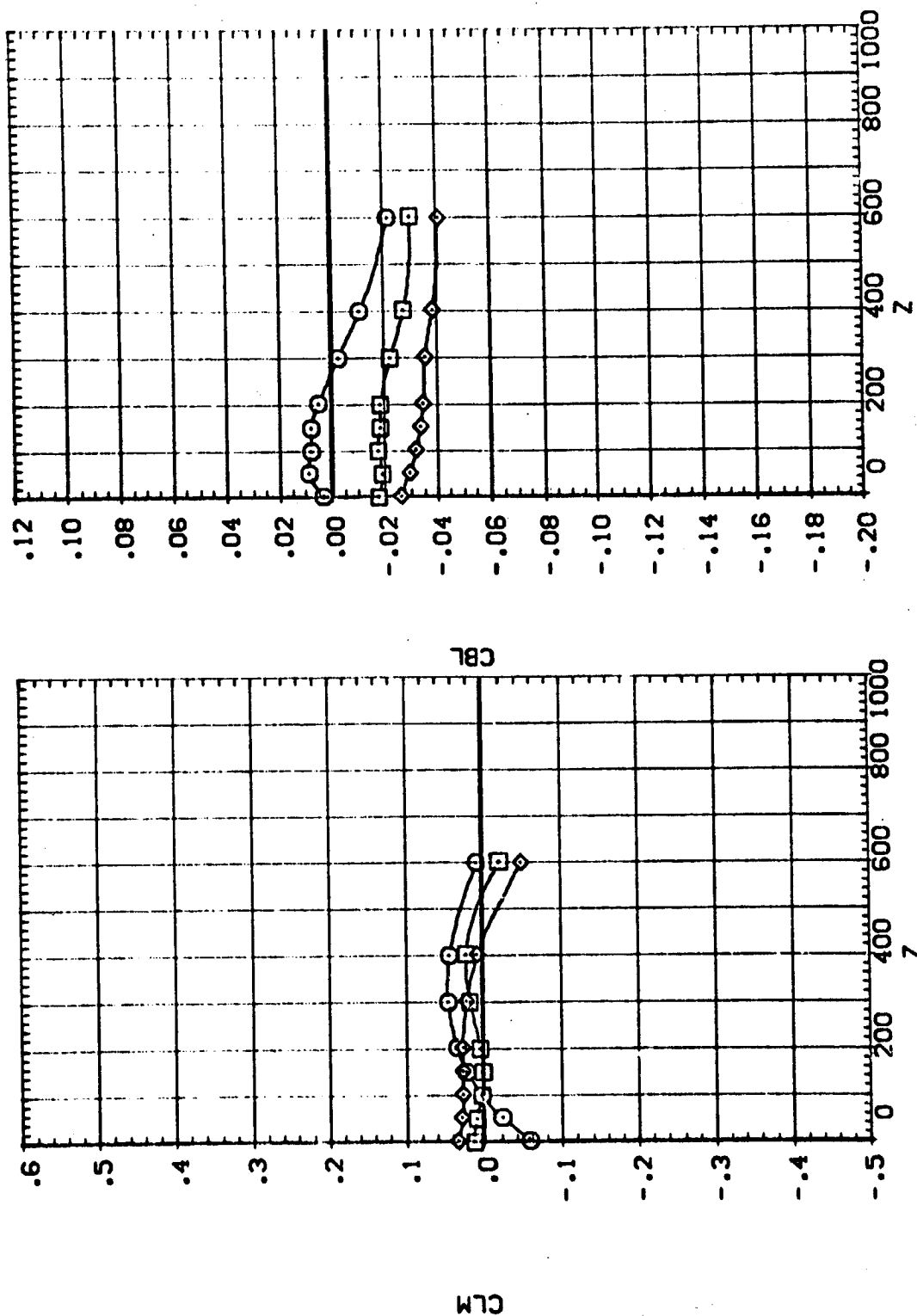


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RIJ233)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTL | 28.900 |
|--------|---------|------|-------------------|-------|----------|
| □ | 199.680 | .415 | 4.510 | BETA | 5.000 |
| ◇ | 402.890 | .415 | 5.000 | DBETA | .000 |
| | | | | PC+PB | 1500.000 |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

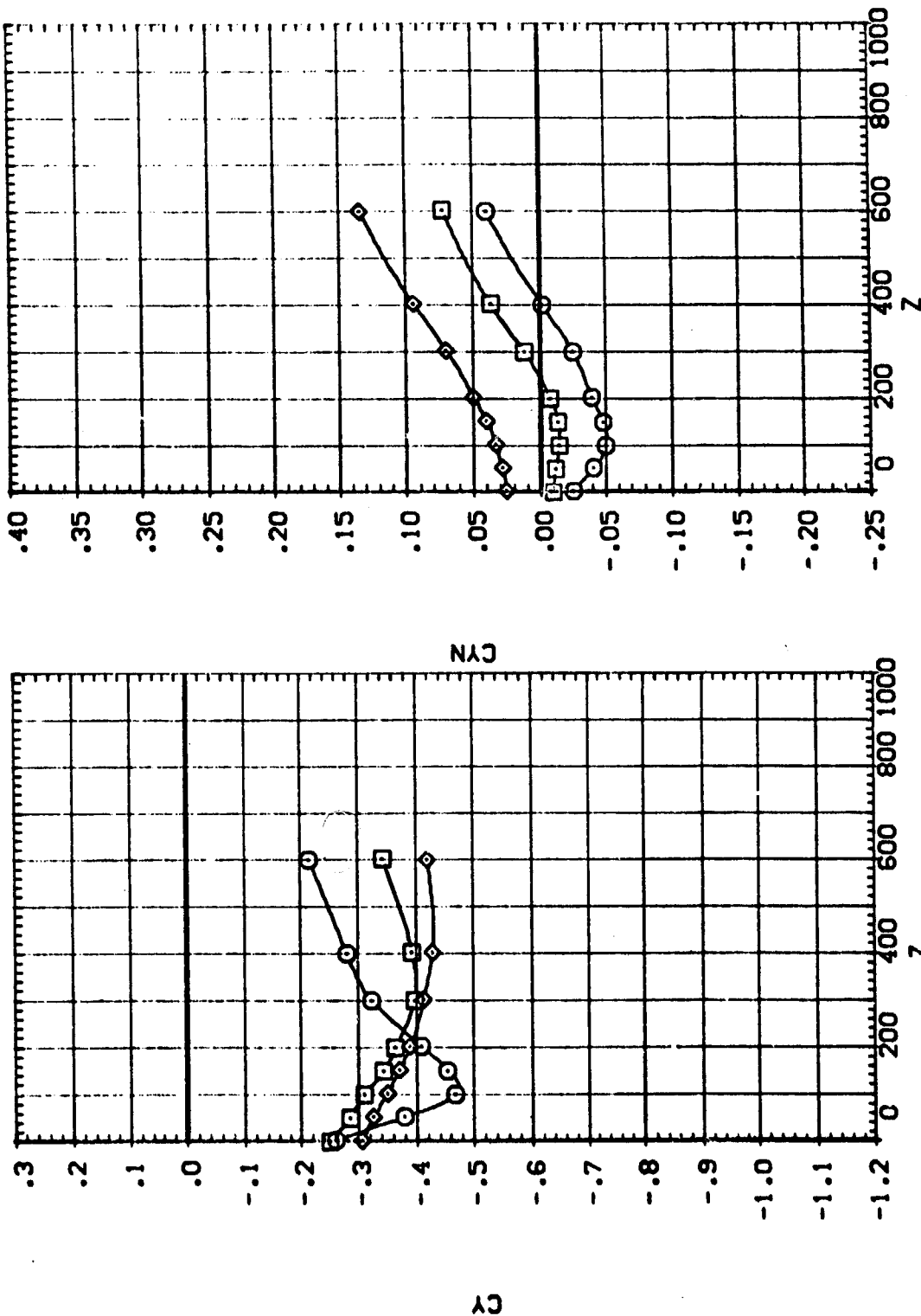
SYMBOL

○ □ ◇

PARAMETRIC VALUES

| | MACH | PTOTL | 28.900 |
|---------|------|-------|----------|
| 199.680 | .000 | BETA | 5.000 |
| 402.890 | .000 | UBETA | .000 |
| | .000 | PC-HB | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

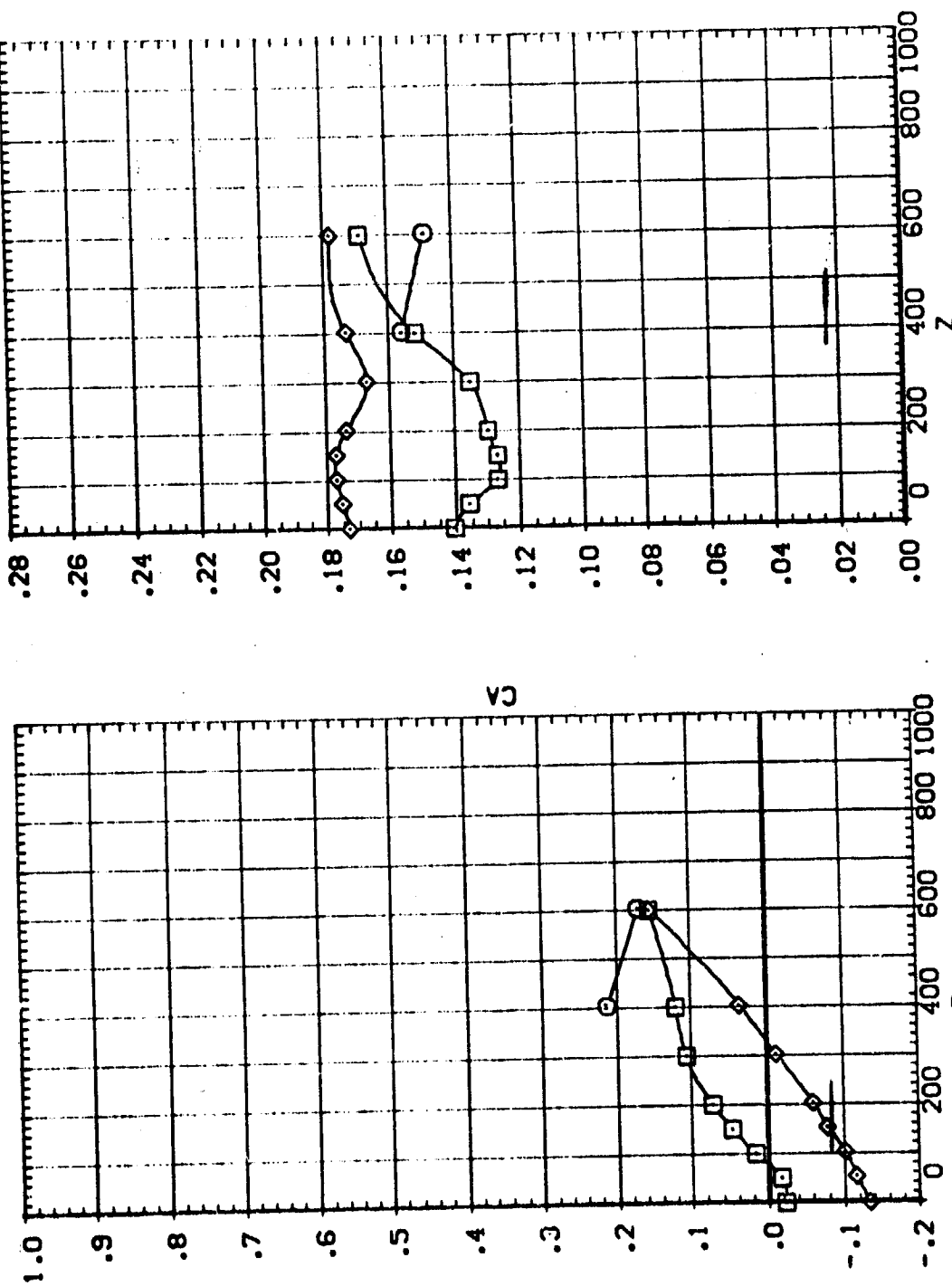
1A13, SRB(S8) WITH PLUMES SEPARATING FROM 09110 (RTJ234)

SYMBOL

□ ◇

| PARAMETRIC VALUES | | | |
|-------------------|--------|-------|----------|
| Y | MACH | PTOTL | 28.900 |
| .371 | 4.510 | BETA | 5.000 |
| 199.450 | .000 | DBETA | -5.000 |
| 398.620 | 5.000 | PC-M8 | 1500.000 |
| | DALPHA | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ234)

SYMBOL

Y
 199.450
 398.620

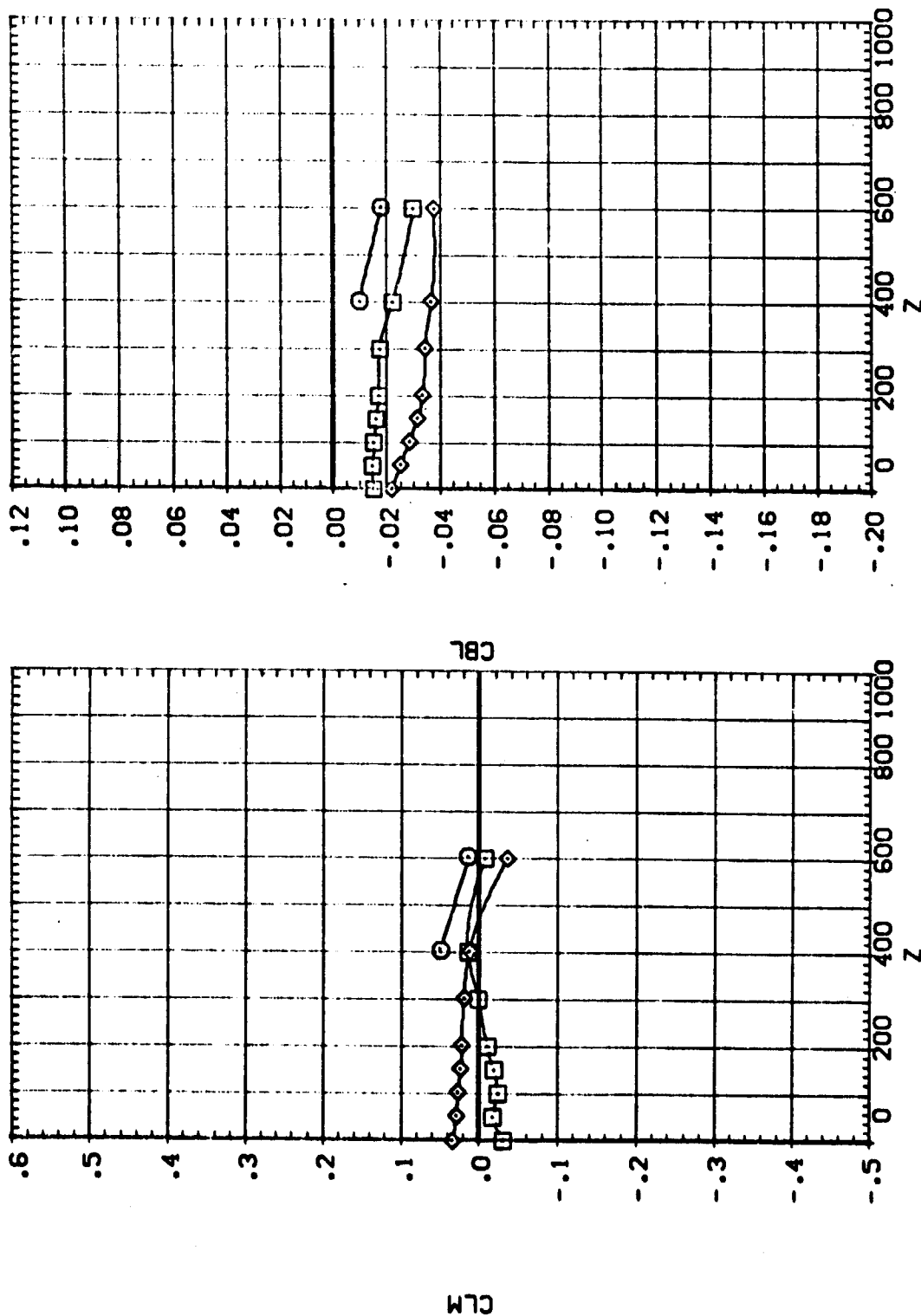
MACH
 ALPHA
 DAPHA
 X

PARAMETRIC VALUES
 4.510
 .000
 5.000
 .000

PTOTL
 BETA
 DBETA
 PC-HB

28.900
 5.000
 -5.000
 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

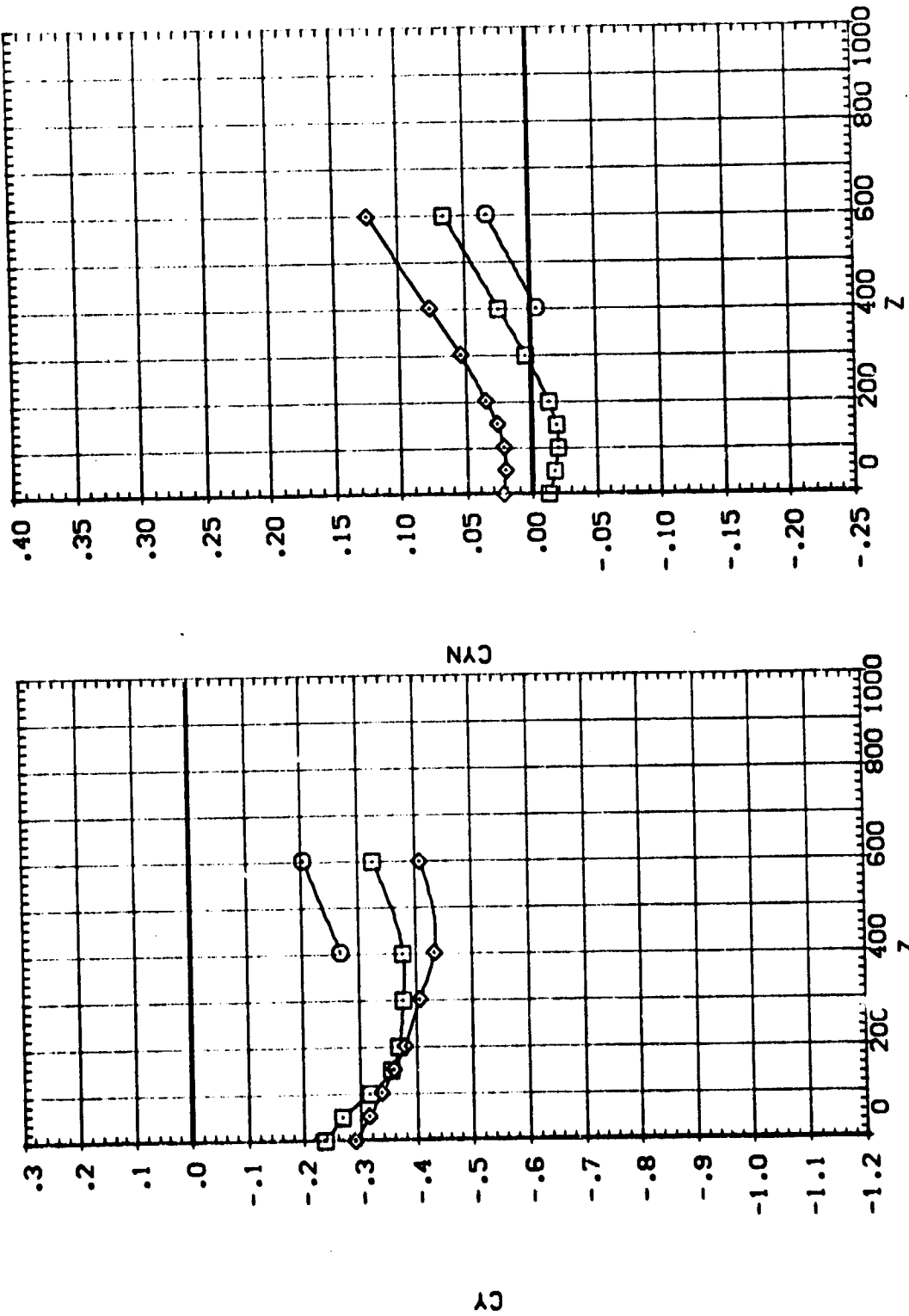


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ234)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | POTL | 28.900 | |
| ○ | 199.450 | ALPHA | .000 | BETA | 5.000 | |
| □ | 398.620 | DALPHA | 5.000 | DBETA | -5.000 | |
| ◇ | | X | .000 | PC+8 | 1500.000 | |

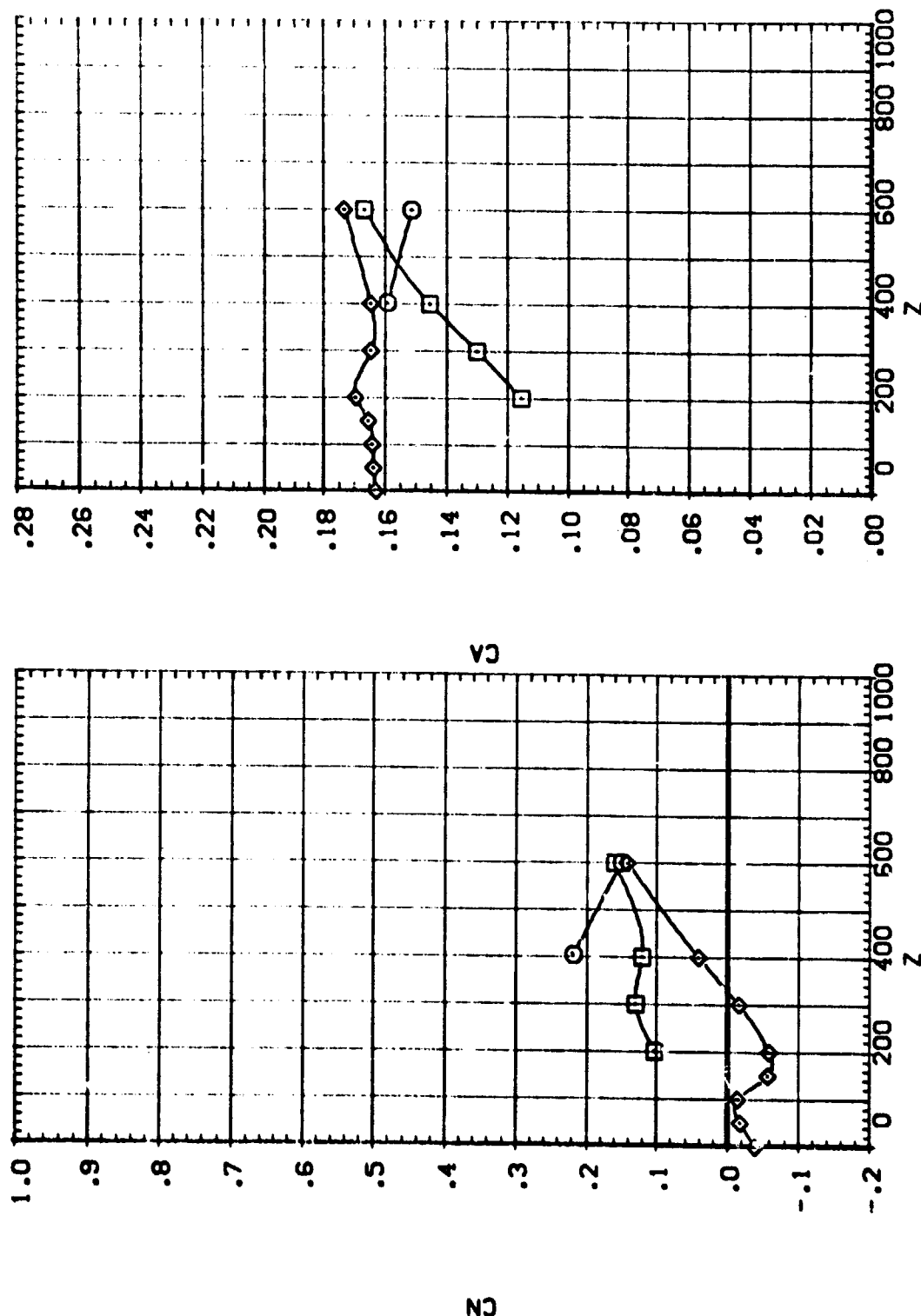


SYMBOL

○ □ ◇

PARAMETRIC VALUES
 2.246 MACH 4.510 PTOTL 28.900
 201.330 ALPHA .000 BETA 5.000
 399.940 DALPHA 5.000 DBETA -10.000
 X .000 PC+PB 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

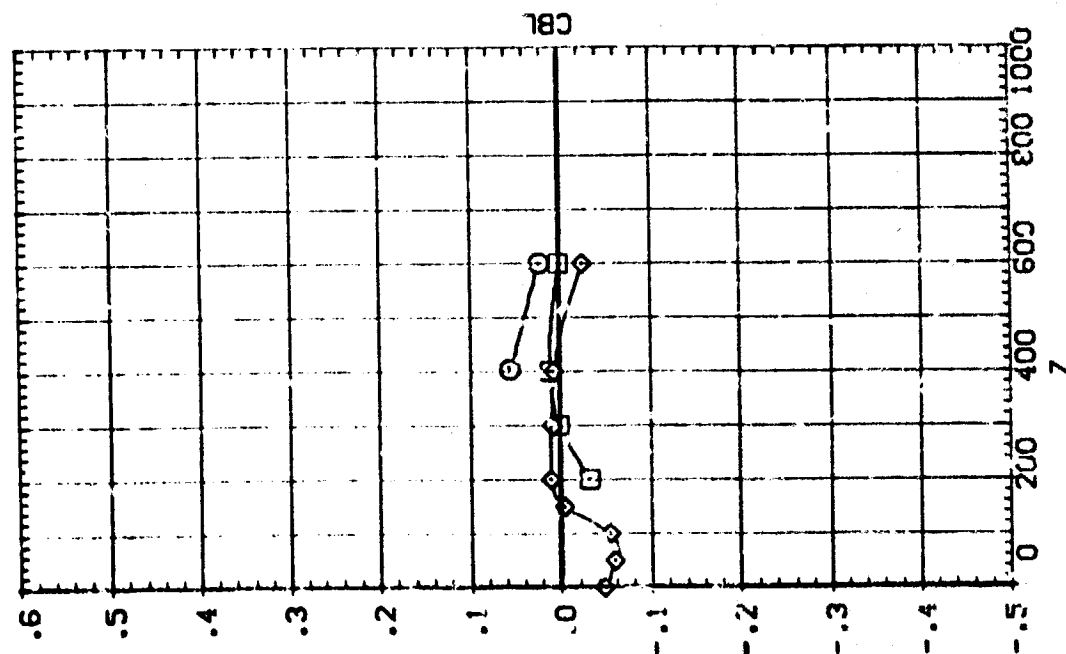
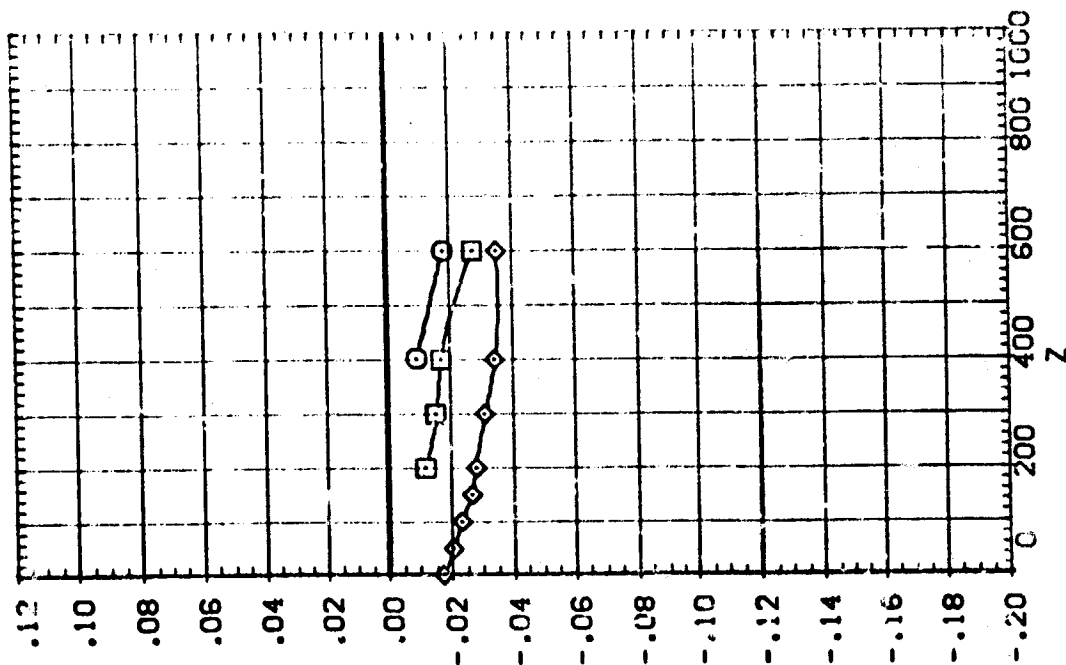


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ235)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|-------|----------|
| | | MACH | 4.510 | PTOTL | 28.900 |
| ○ | 201.330 | ALPHA | .000 | BETA | 5.000 |
| ◇ | 399.940 | DALPHA | 5.000 | DBETA | -10.000 |
| | | X | .000 | PC+8 | 1500.000 |



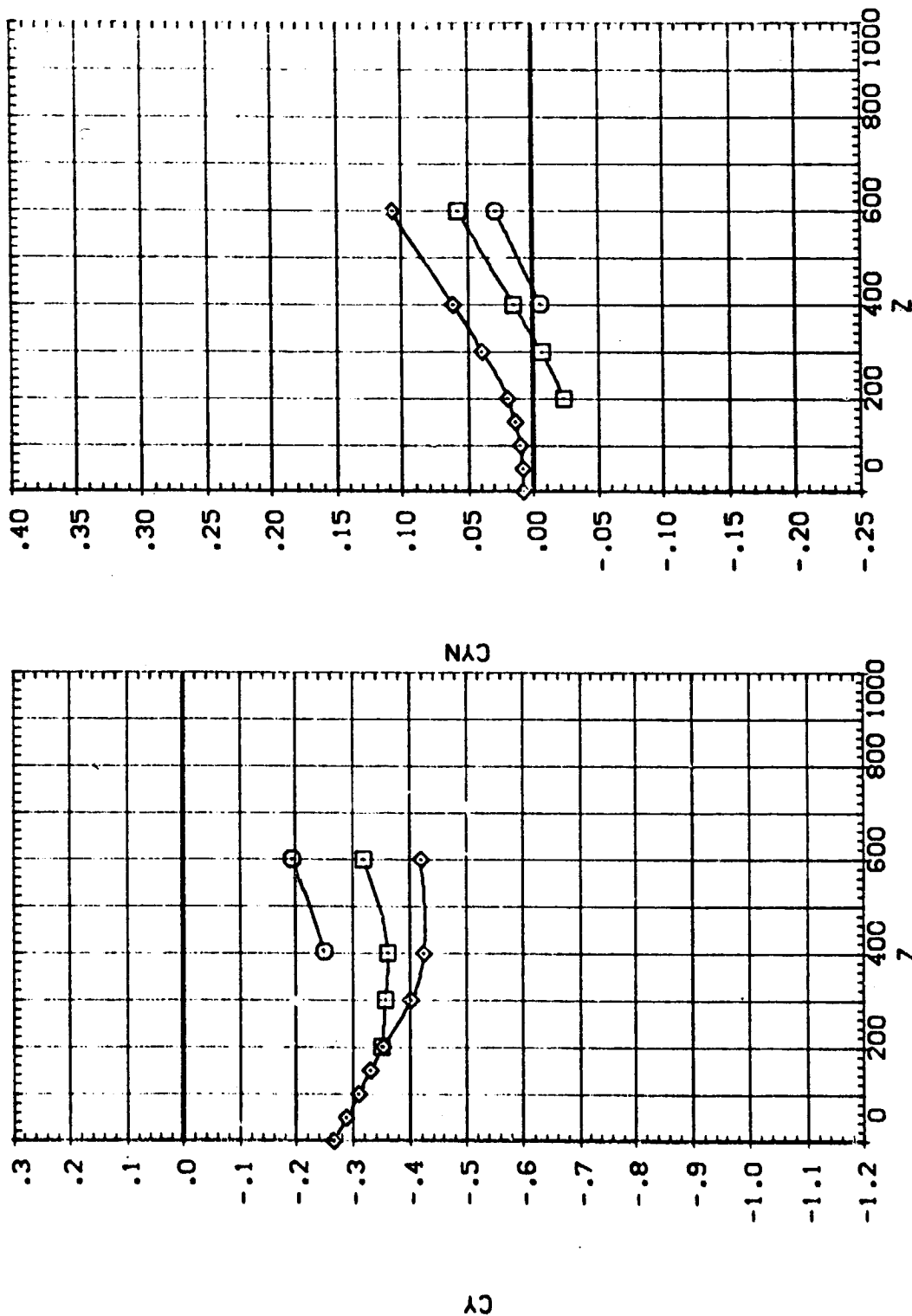
EFFECT OF SRB W/PLUMES SEPARATION ON 09B/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ235)

SYMBOL
 ○
 □
 ◇

PARAMETRIC VALUES
 Y 2.246 MACH 4.510 PTO TL 28.900
 201.330 ALPHA .000 BETA 5.000
 398.940 D ALPHA 5.000 D BETA -10 0.0
 X .000 PC+8 1500.00

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

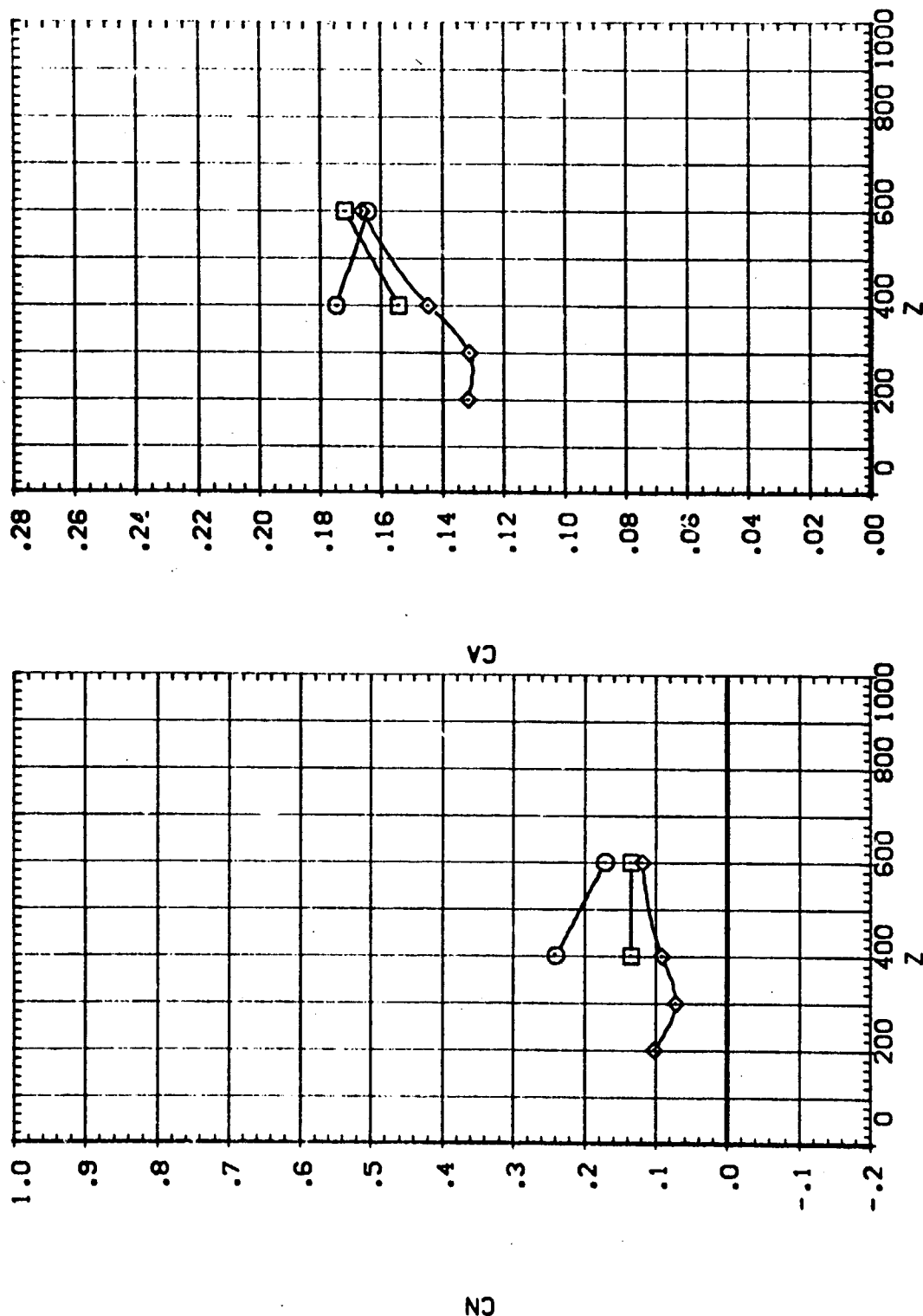


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ236)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | |
|---------|------|-------------------|----------|
| Y | .922 | MACH | 28.900 |
| 200.280 | .000 | BETA | 5.000 |
| 400.820 | .000 | DBETA | -20.000 |
| | .000 | PCHE | 1500.000 |
| | X | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ236)

SYMBOL

○ □ ◇

Y

.922
200.280
400.820

MACH
ALPHA
DALPHA
X

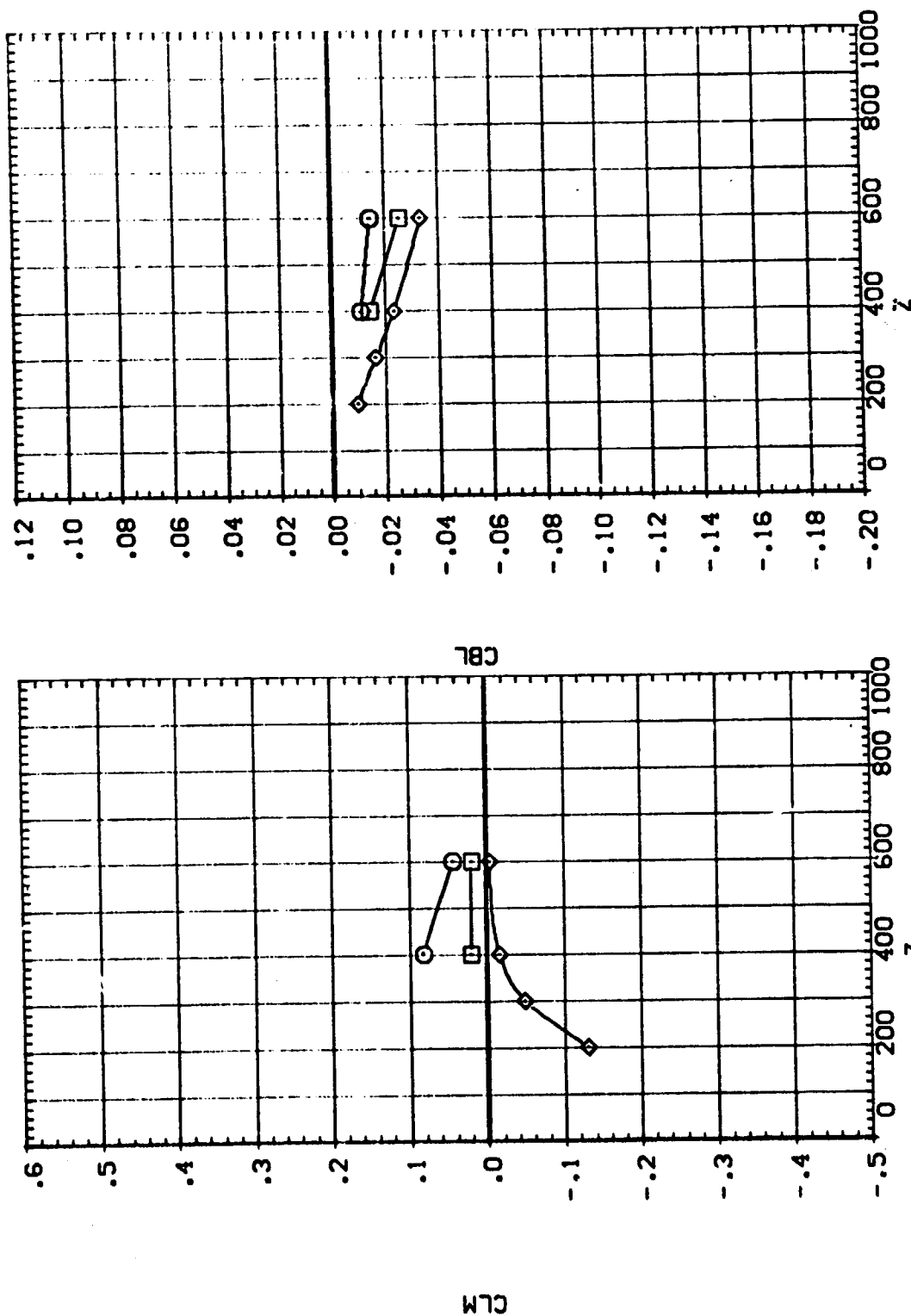
PARAMETRIC VALUES

4.510
.000
5.000
.000

PITOTL
BETA
DBETA
PC+PB

28.900
5.000
-20.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

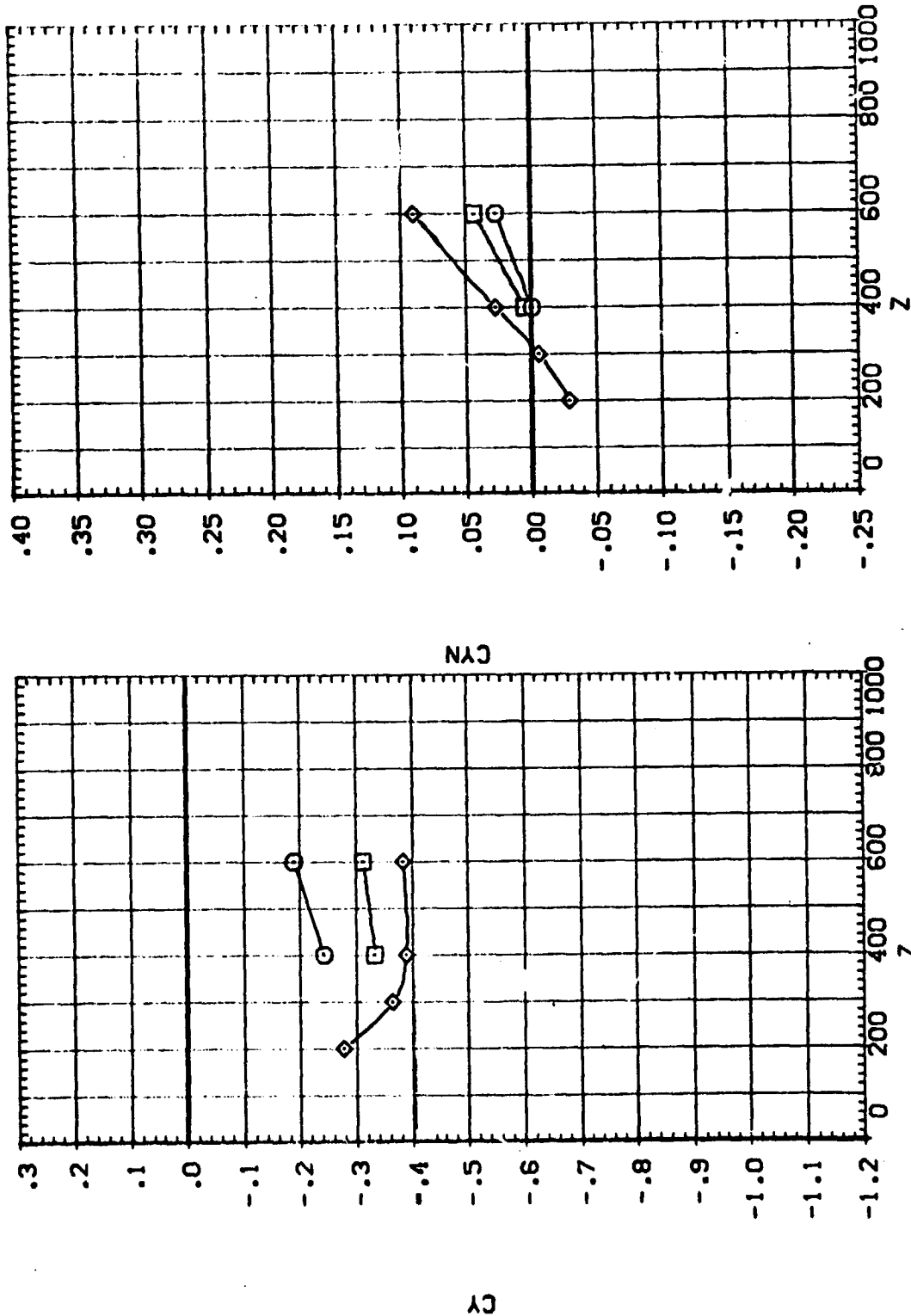


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ236)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

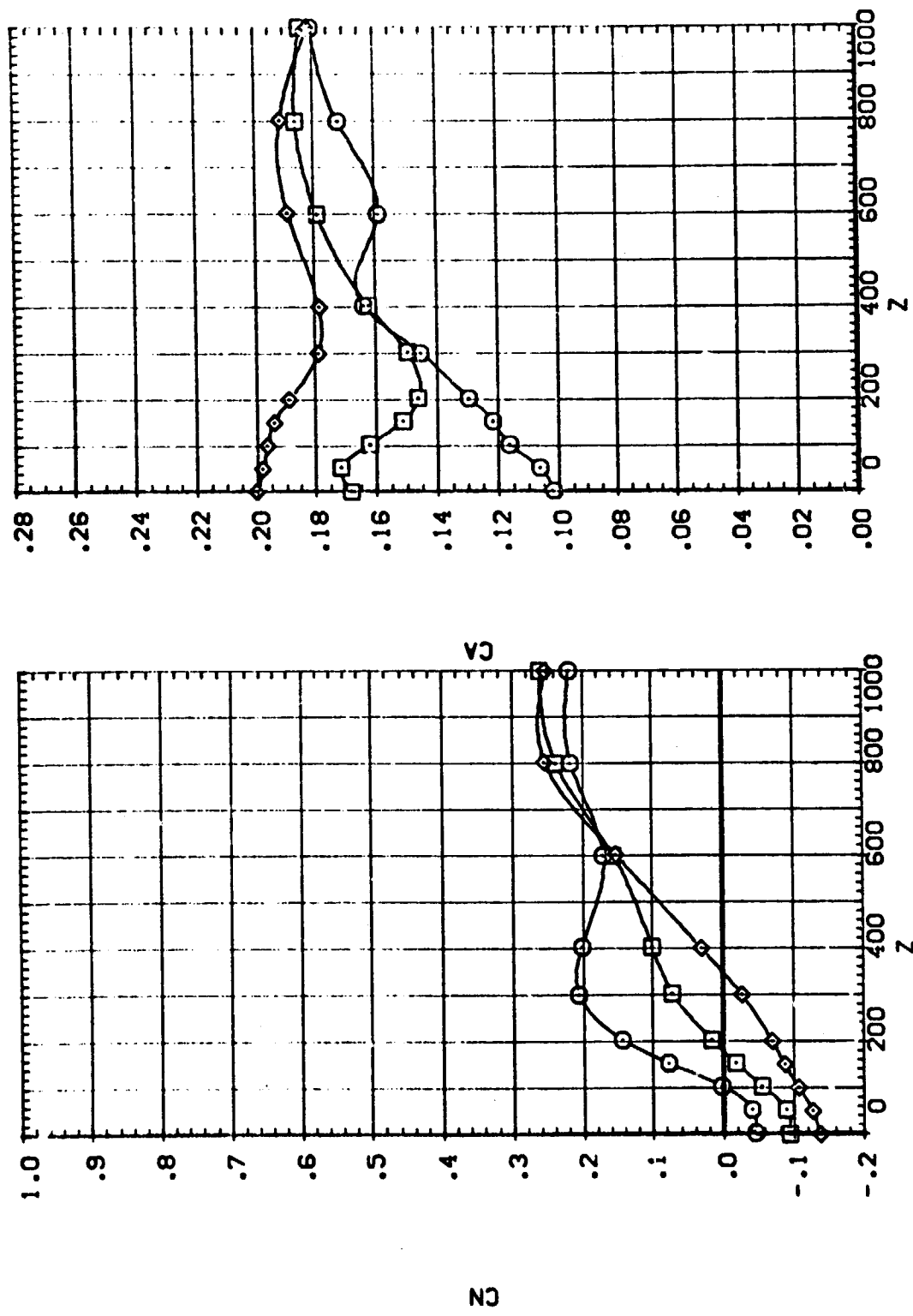
| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|-------|--------|
| | | MACH | PTOTL | BETA | PC+PB |
| ○ | .922 | 200.280 | 4.510 | .000 | 28.900 |
| □ | 400.820 | ALPHA | 5.000 | DBETA | 5.000 |
| ◇ | X | 1500.000 | | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| □ | 202.130 | ALPHA | .000 | BETA | 5.000 | |
| ◇ | 399.400 | DALPHA | .000 | DBETA | 5.000 | |
| | | X | .000 | PC+PB | 1500.000 | |

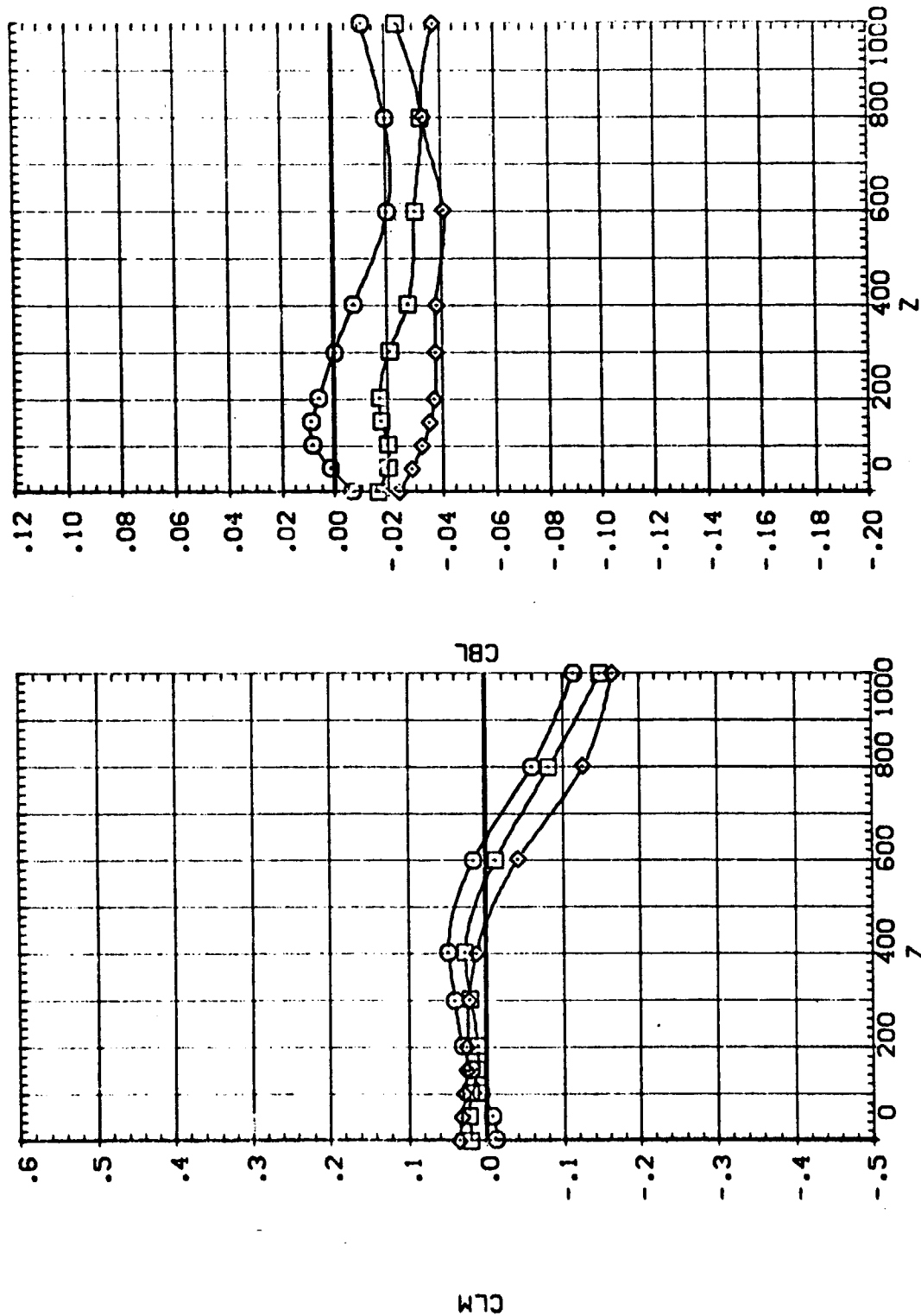


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ237)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

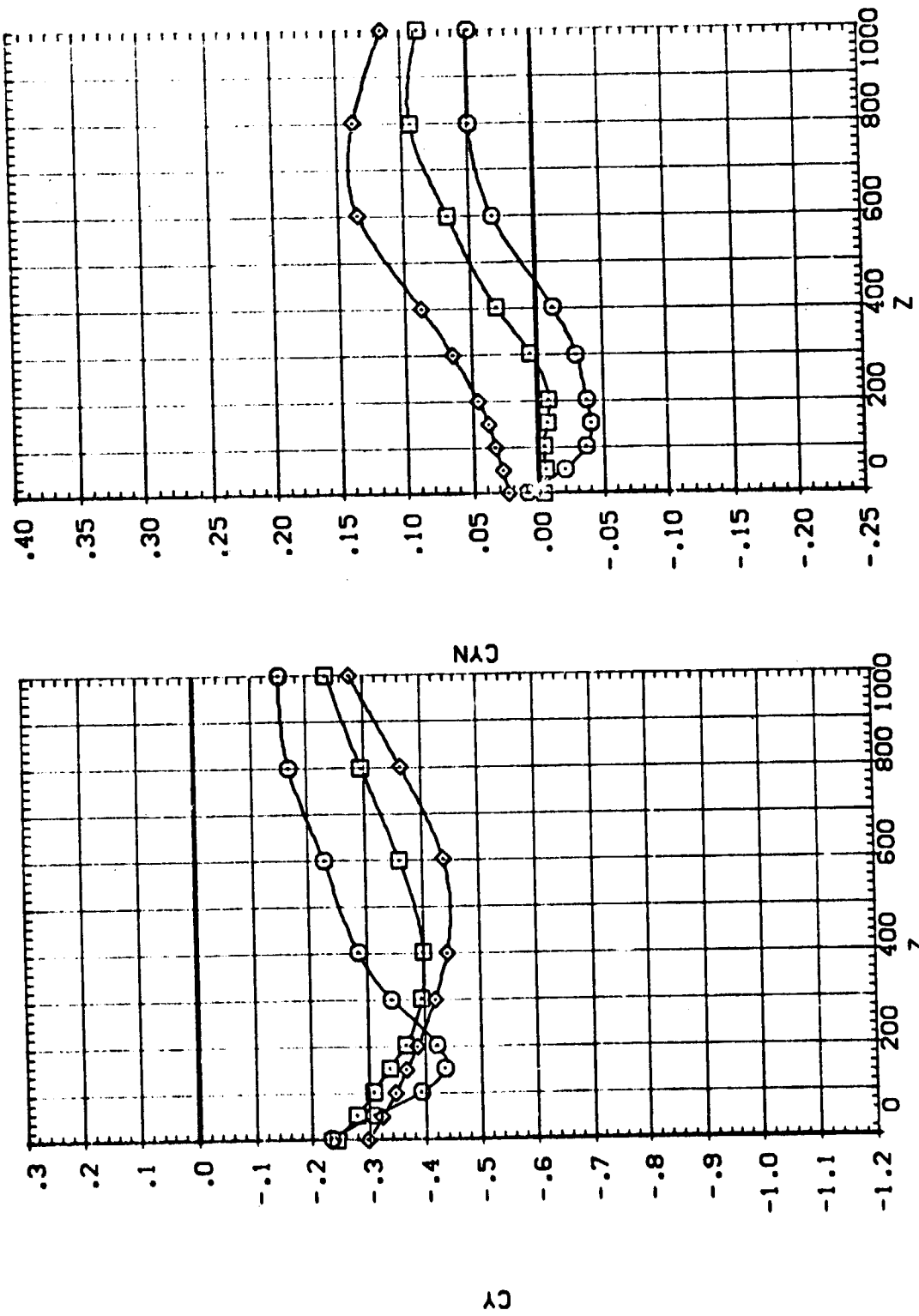
| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 702.130 | ALPHA | .000 | BETA | 5.000 | |
| □ | 350.000 | ALPHA | .000 | DBETA | 5.000 | |
| ◇ | 350.000 | PC+HB | .000 | | 1500.000 | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

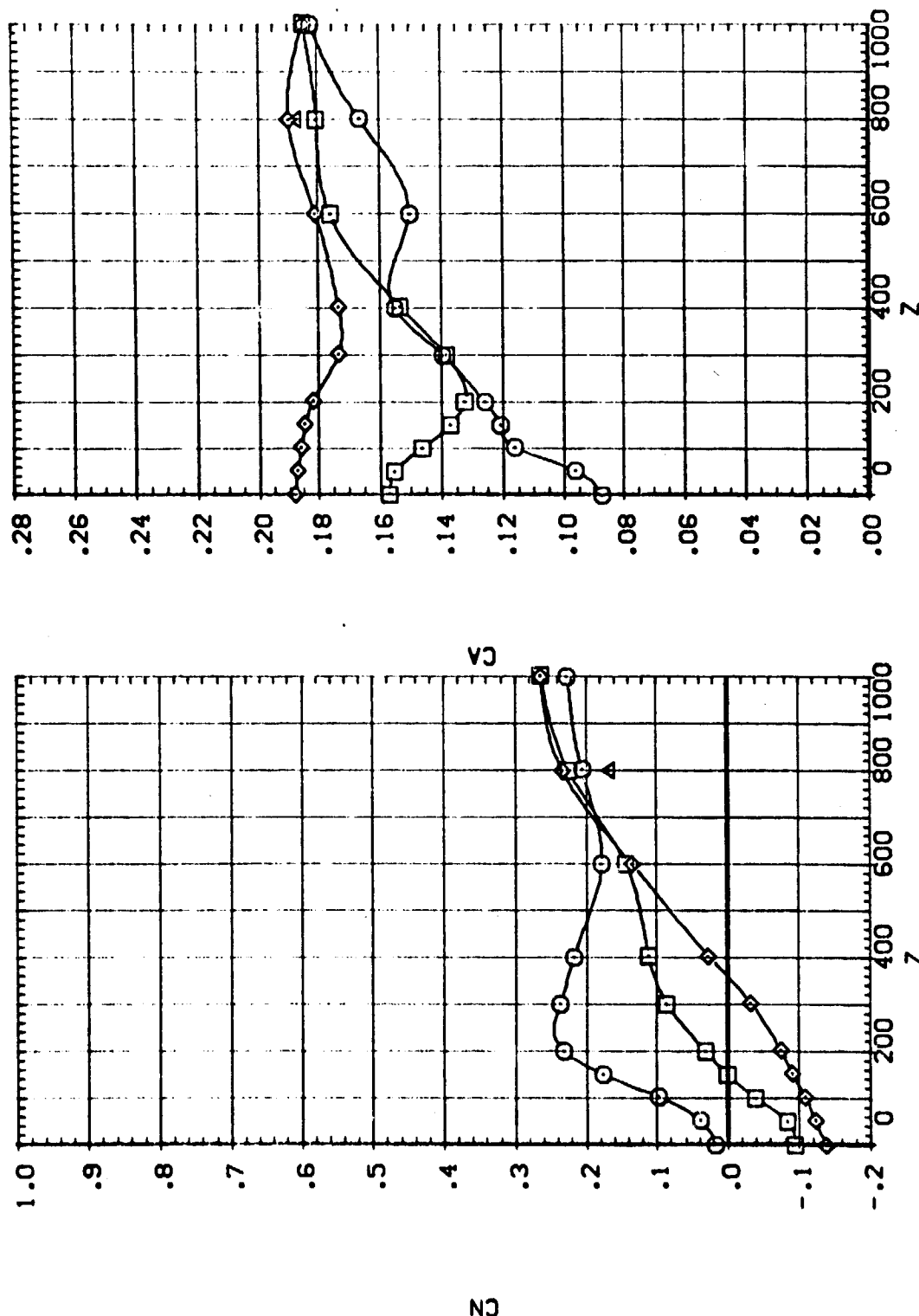
| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|----------|--|
| | | MACH | PTOTL | 28.500 | |
| ○ | .273 | 4.510 | BETA | 5.000 | |
| □ | 202.130 | .000 | DBETA | 5.000 | |
| ◇ | 399.400 | .000 | PC+P8 | 1500.000 | |



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ238)

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|-------|----------|--|
| | | MACH | 4.510 | PTOTL | 28.900 | |
| ○ | 198.800 | ALPHA | .000 | BETA | 5.000 | |
| □ | 402.490 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 800.280 | X | .000 | PCMB | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



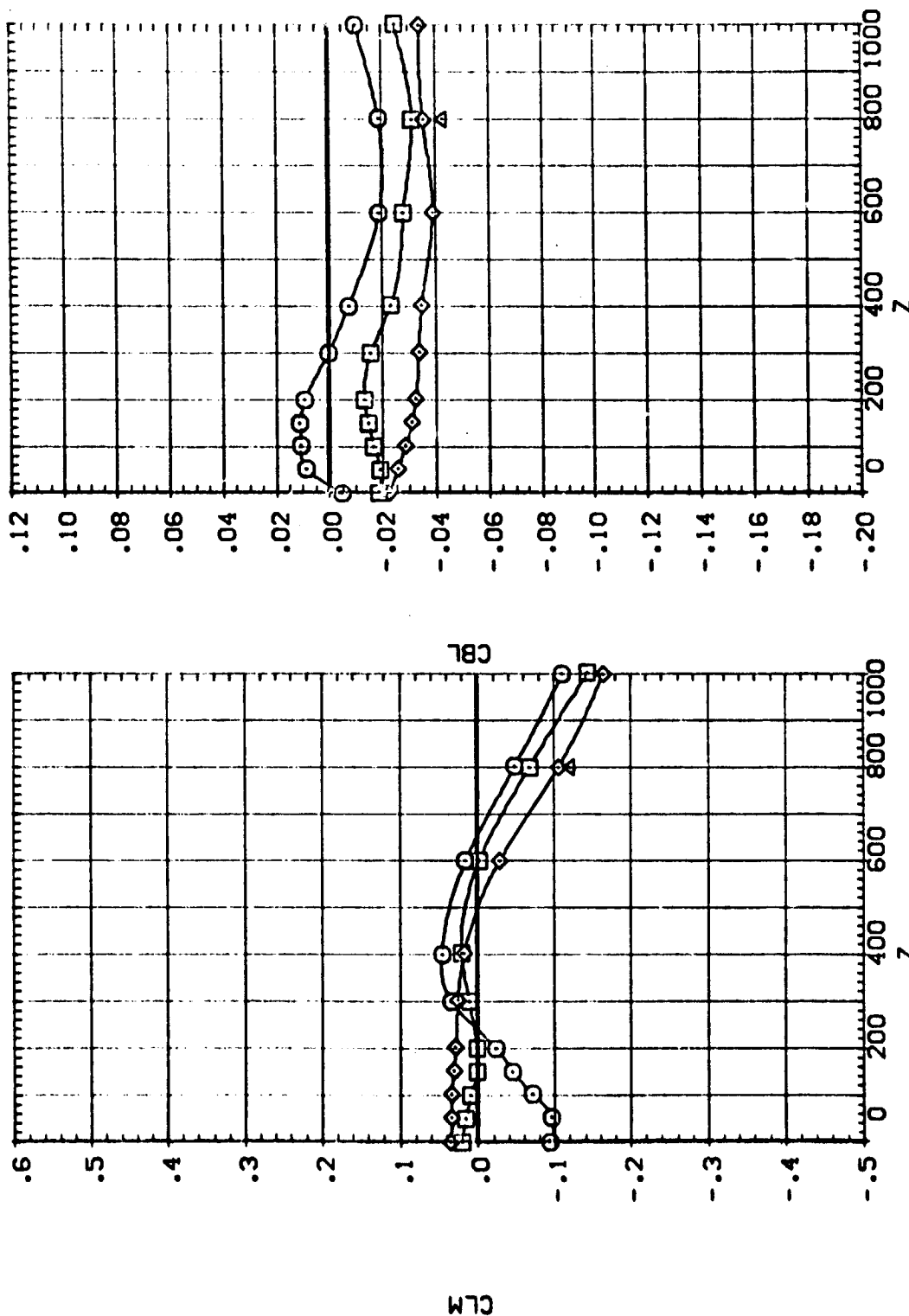
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| Y | MACH | PTOTL | 28.900 |
|---------|-------|-------|----------|
| .318 | 4.510 | BETA | 5.000 |
| 198.800 | .000 | DBETA | .000 |
| 402.490 | .000 | PC-#8 | 1500.000 |
| 800.280 | X | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

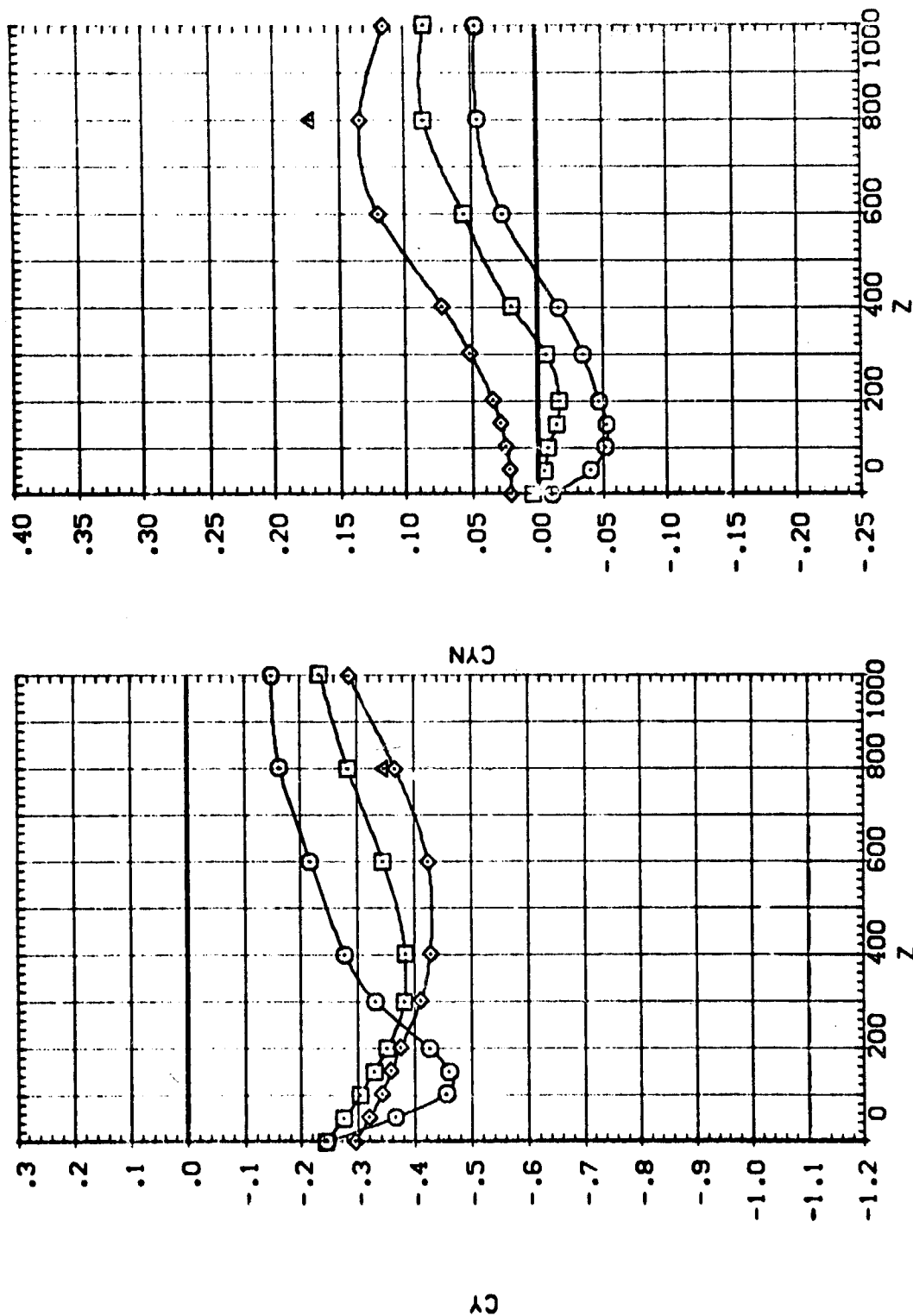


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ238)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 26.900 | |
| ○ | 198.800 | ALPHA | .000 | BETA | 5.000 | |
| □ | 402.450 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 800.280 | X | .000 | PC498 | 1500.000 | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SYMBOL

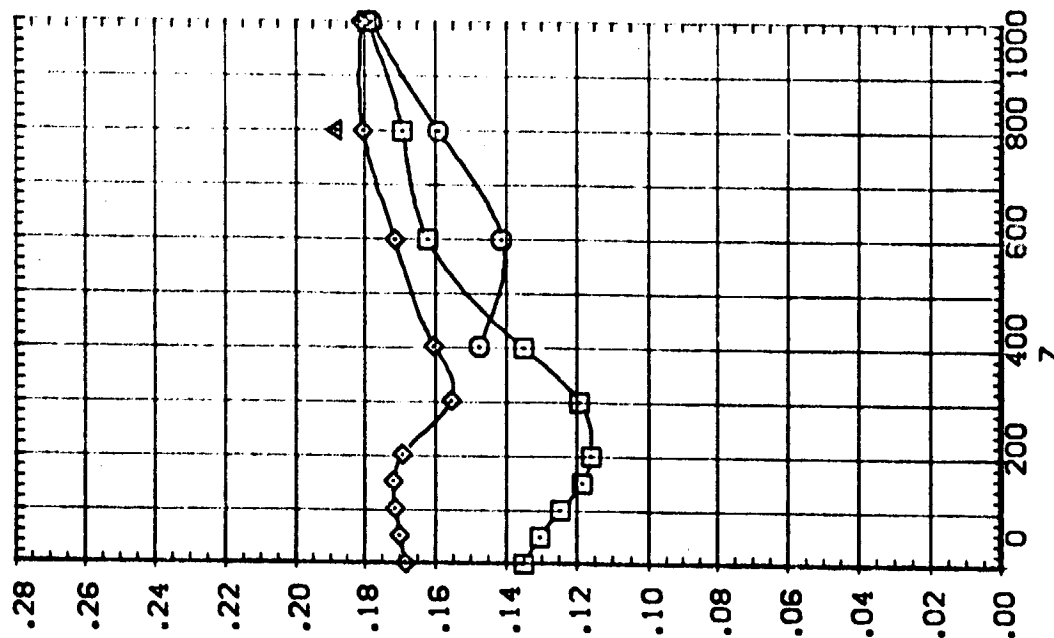
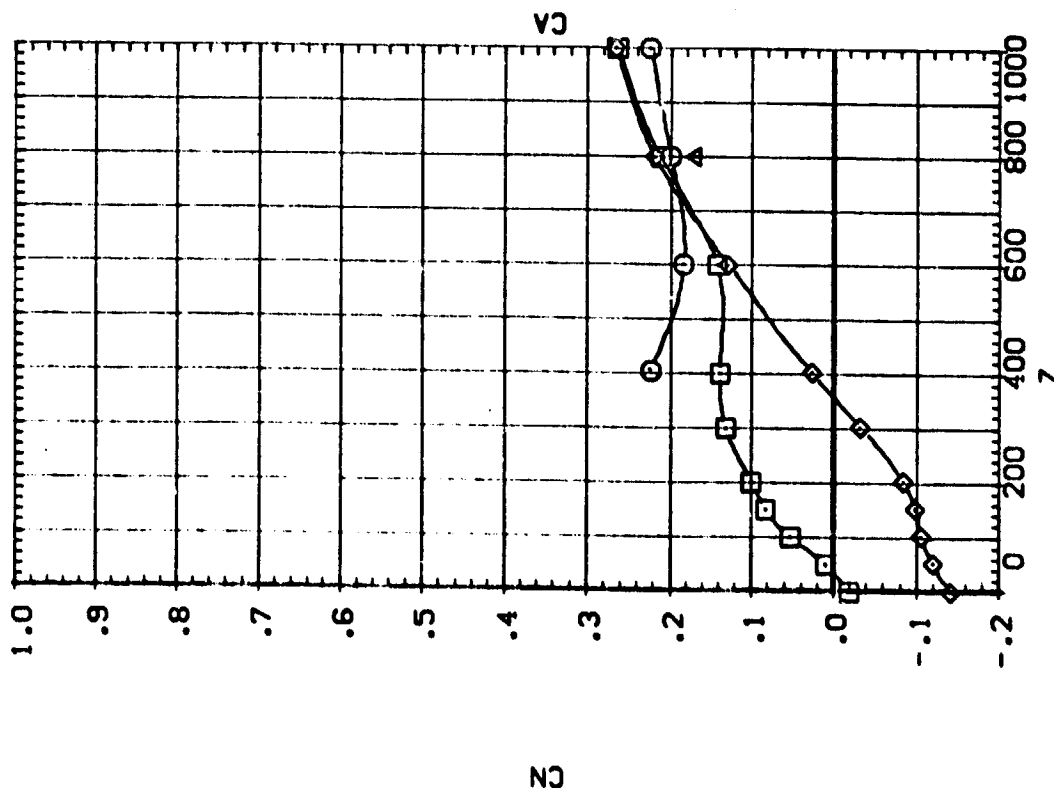
Y

PARAMETRIC VALUES

| Y | MACH | PTOTL | 20.500 |
|---------|------|-------|----------|
| 198.470 | .000 | BETA | 5.000 |
| 400.250 | .000 | DBETA | -5.000 |
| 799.800 | .000 | PC+PB | 1500.000 |

□
 ◇
 △

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

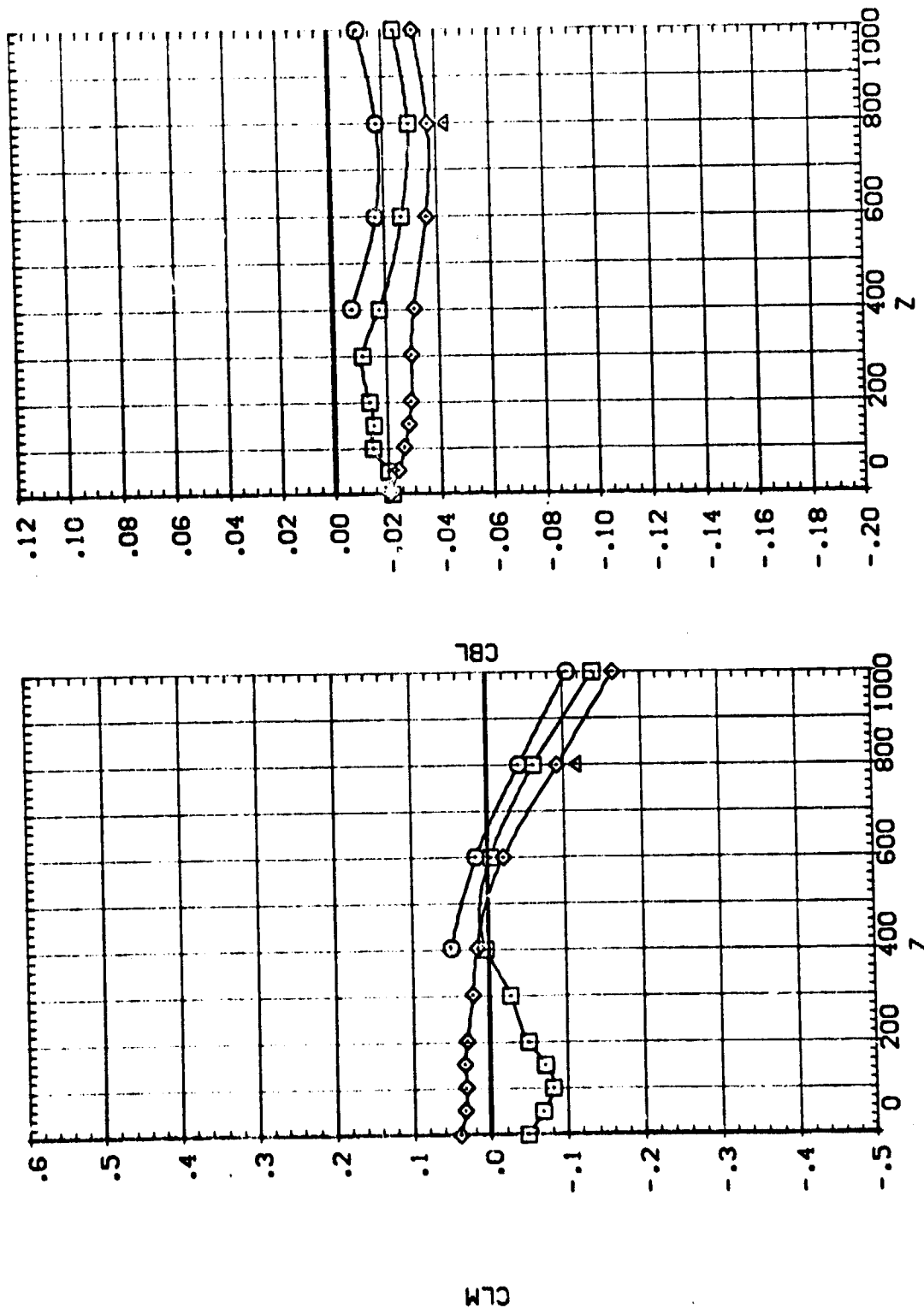


EFFECT OF SRB W/PLUMES SEPARATION ON 093/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ239)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| STAGE | Y | MACH | PARAMETRIC VALUES | | | |
|---------|---------|--------|-------------------|-------|--------|----------|
| | | | 4.510 | P10TL | 28.900 | 5.000 |
| 198.470 | 198.470 | ALPHA | .000 | BETA | -5.000 | 1500.000 |
| 400.250 | 400.250 | DALPHA | .000 | DBETA | | |
| 799.800 | 799.800 | X | .000 | PC+PB | | |



EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

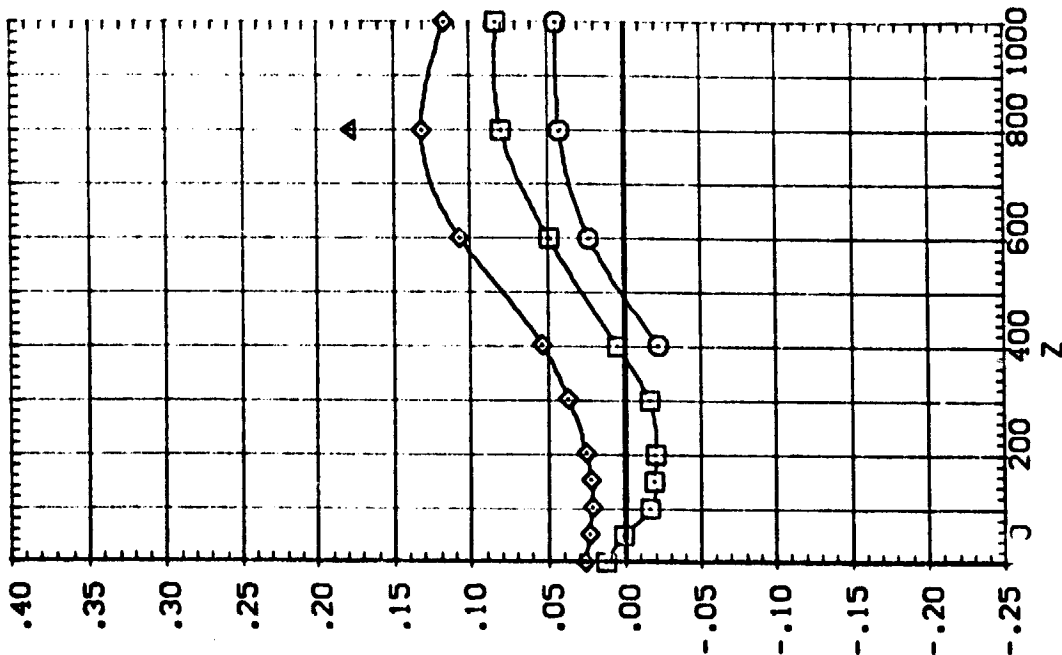
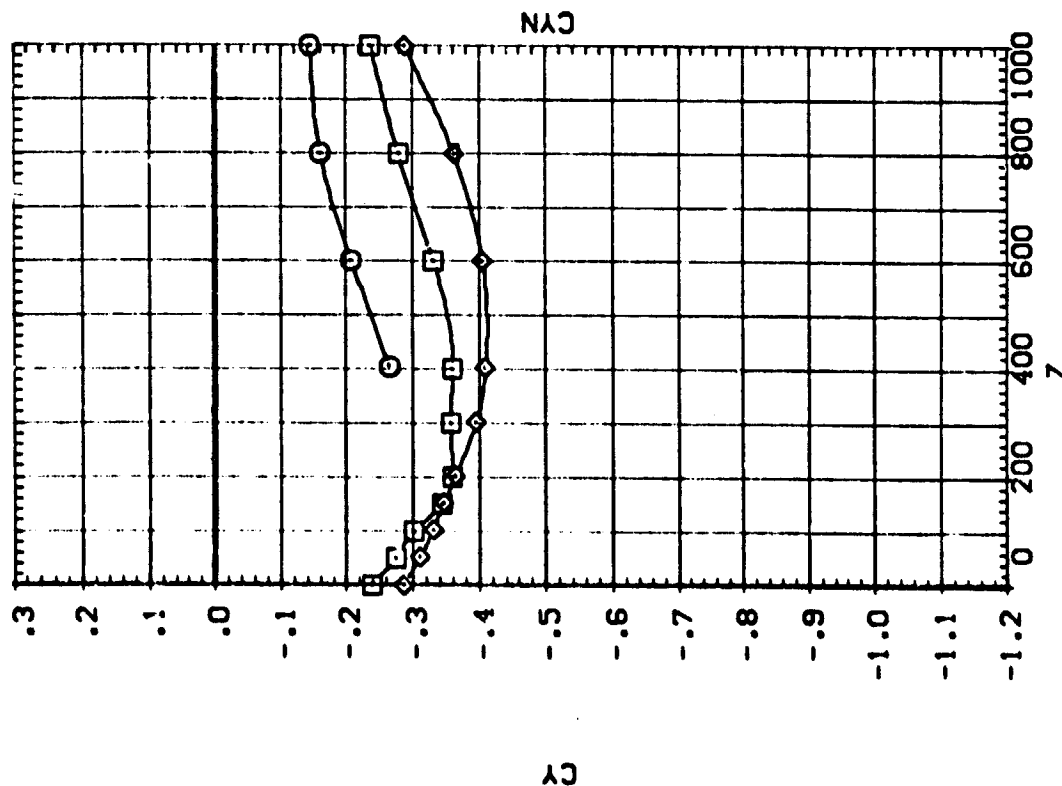
SYMBOL

PARAMETRIC VALUES

| Y | MACH | PIOTL | 28.900 |
|---------|--------|-------|----------|
| 198.470 | ALPHA | .000 | BETA |
| 400.250 | DALPHA | .000 | DBETA |
| 799.800 | X | .000 | PC+PB |
| | | | 1500.000 |

○
□
◇
△

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

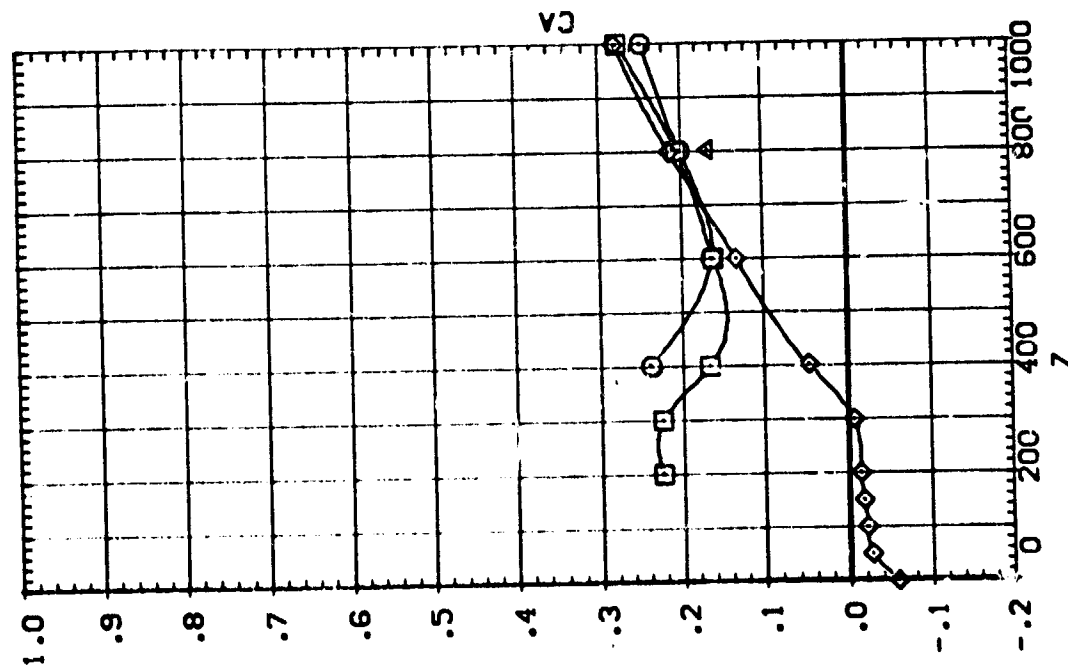
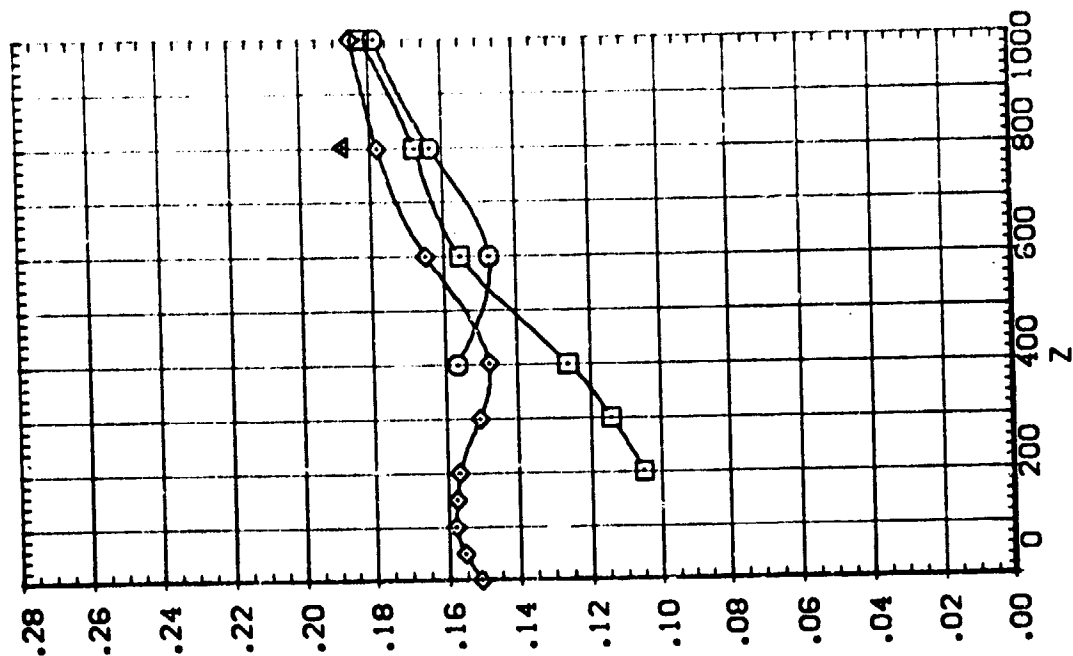


EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ240)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|----------|-------|
| | | MACH | PTOTL | BETA | PC+PB |
| ○ | 1.550 | 4.510 | 28.900 | 5.000 | |
| □ | 200.950 | .000 | BETA | -10.000 | |
| ◇ | 399.530 | .000 | DBETA | 1500.000 | |
| △ | 602.160 | X | PC+PB | | |

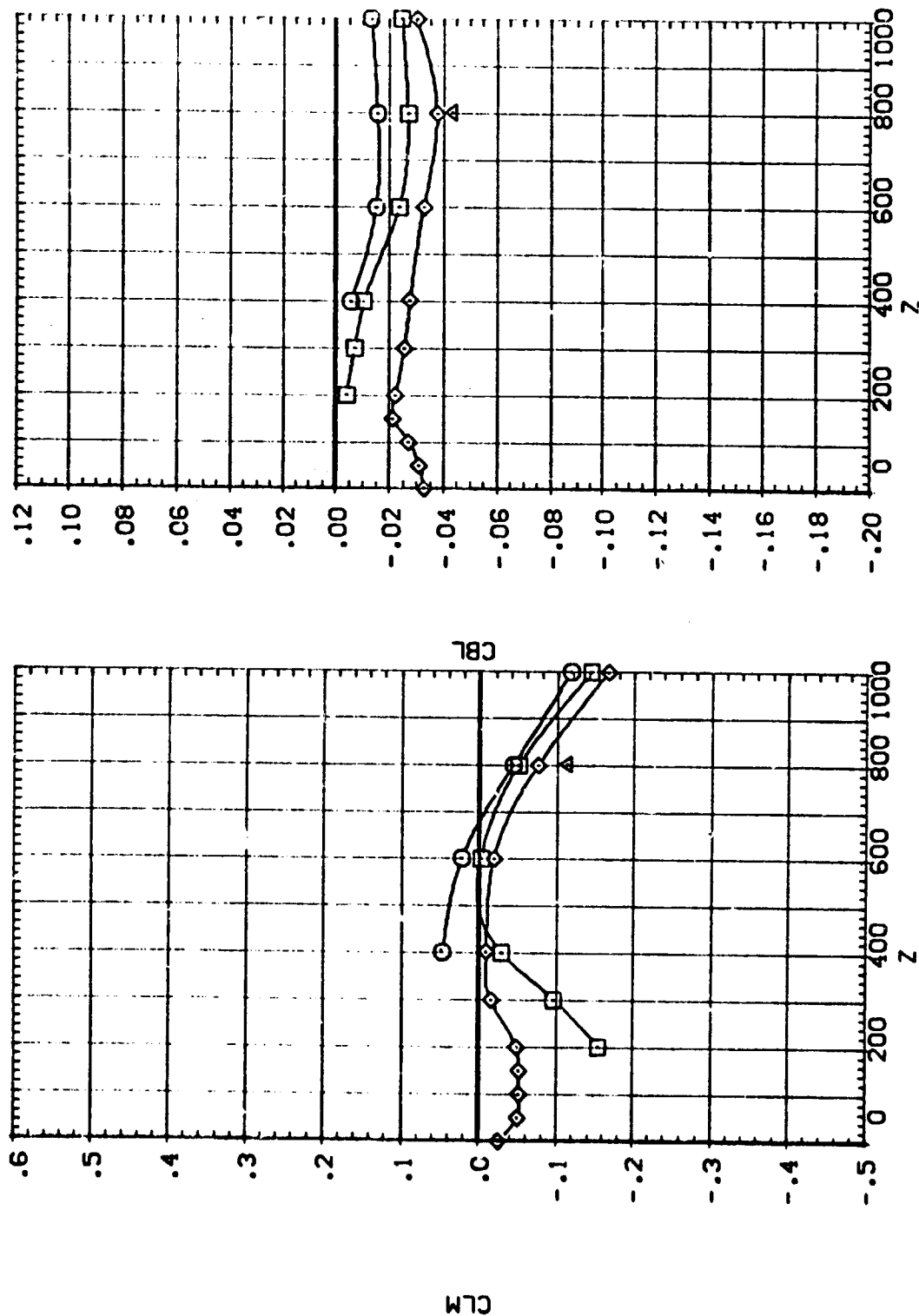


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ240)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | PTOTL | 28.900 | 5.000 |
| ○ | 1.550 | ALPHA | .000 | BETA | -10.000 |
| □ | 200.950 | DALPHA | .000 | PCW#8 | 1500.000 |
| ◇ | 399.520 | | | | |
| △ | 802.180 | | | | |

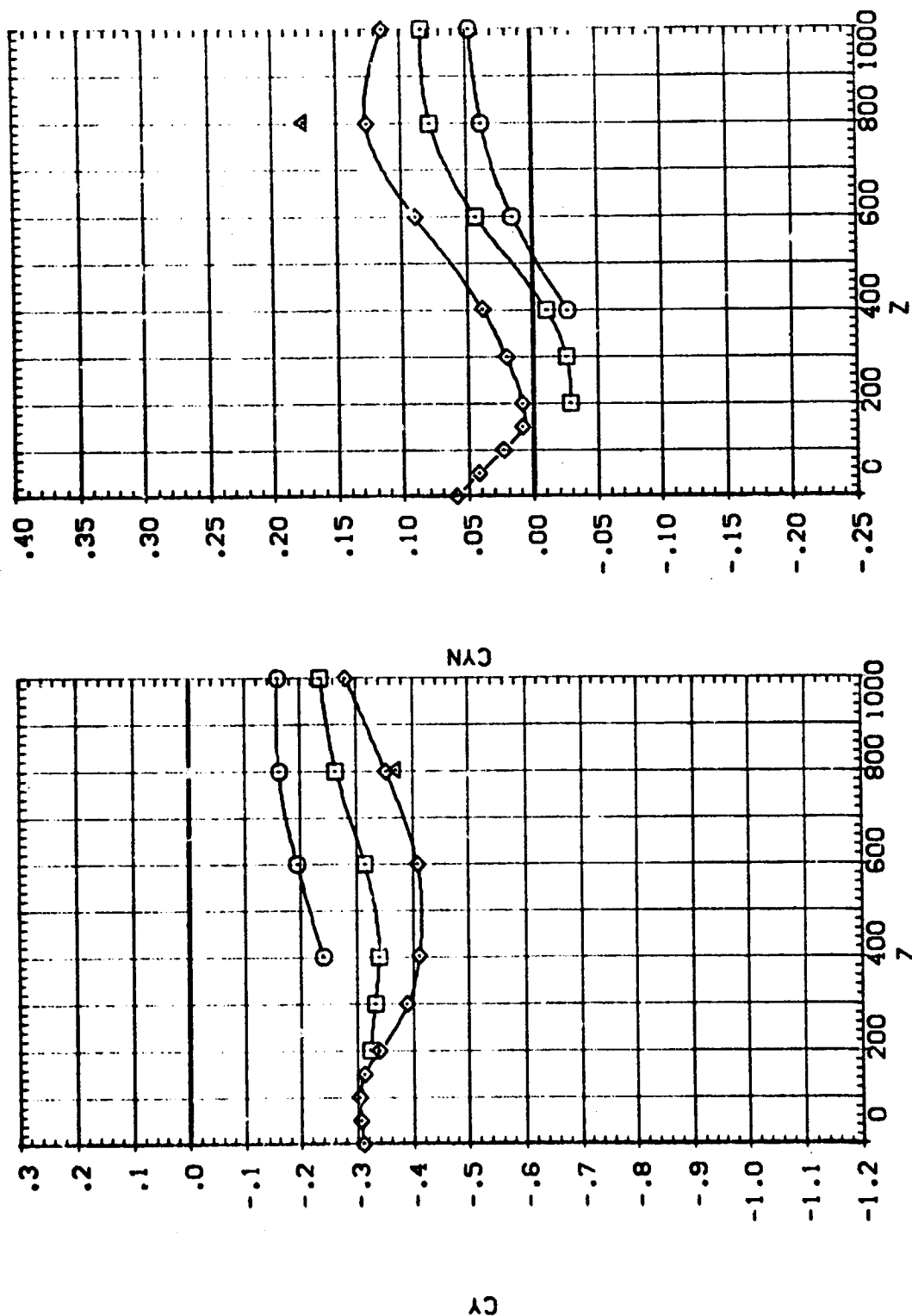


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ240)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

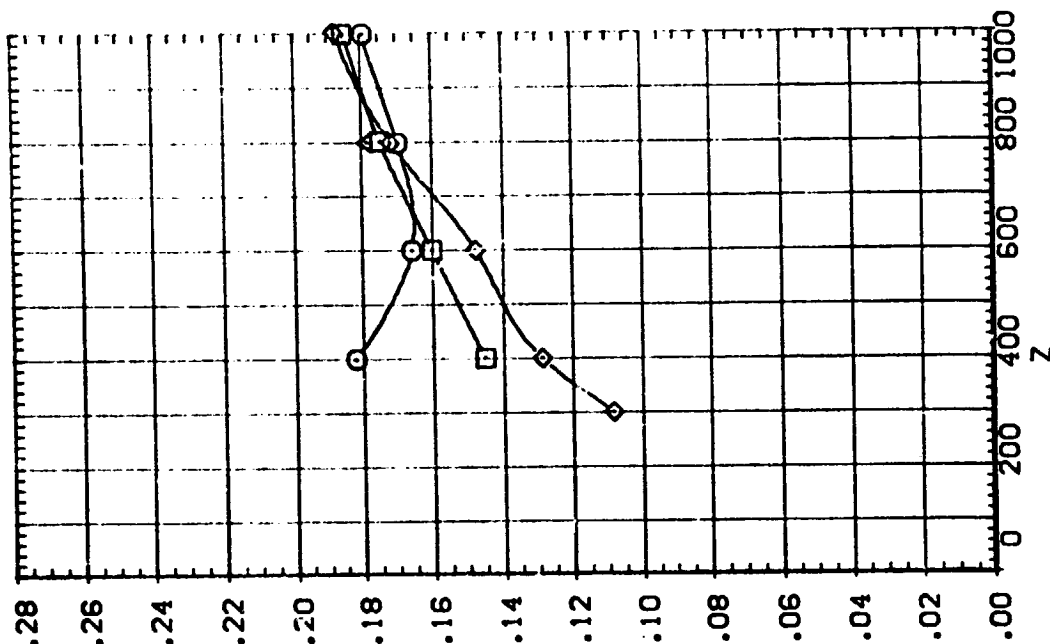
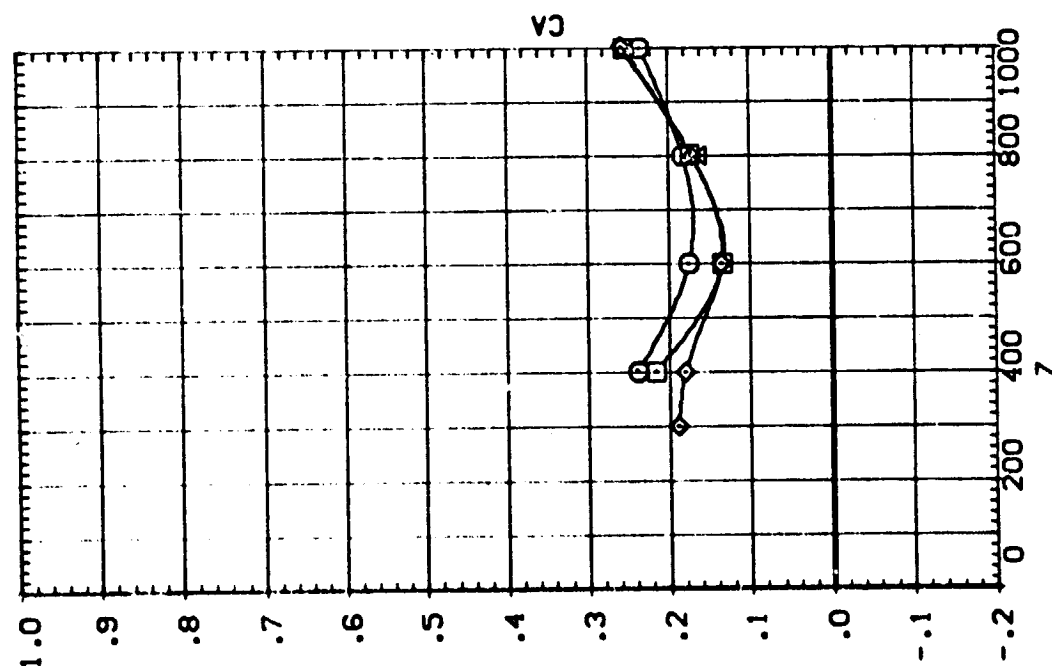
| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|-------|
| | | MACH | PIOTL | BETA | PC-HB |
| ○ | 1.550 | 4.510 | 28.900 | | |
| □ | 200.950 | .000 | 5.000 | | |
| ◇ | 399.530 | .000 | -10.000 | | |
| △ | 802.180 | X | 1500.000 | | |



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ241)

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | PISTL | 28.900 | |
| □ | 200.800 | ALPHA | .000 | BETA | 5.000 |
| ◇ | 401.890 | ALPHA | .000 | BETA | -20.000 |
| △ | 801.920 | X | .000 | PO-MB | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

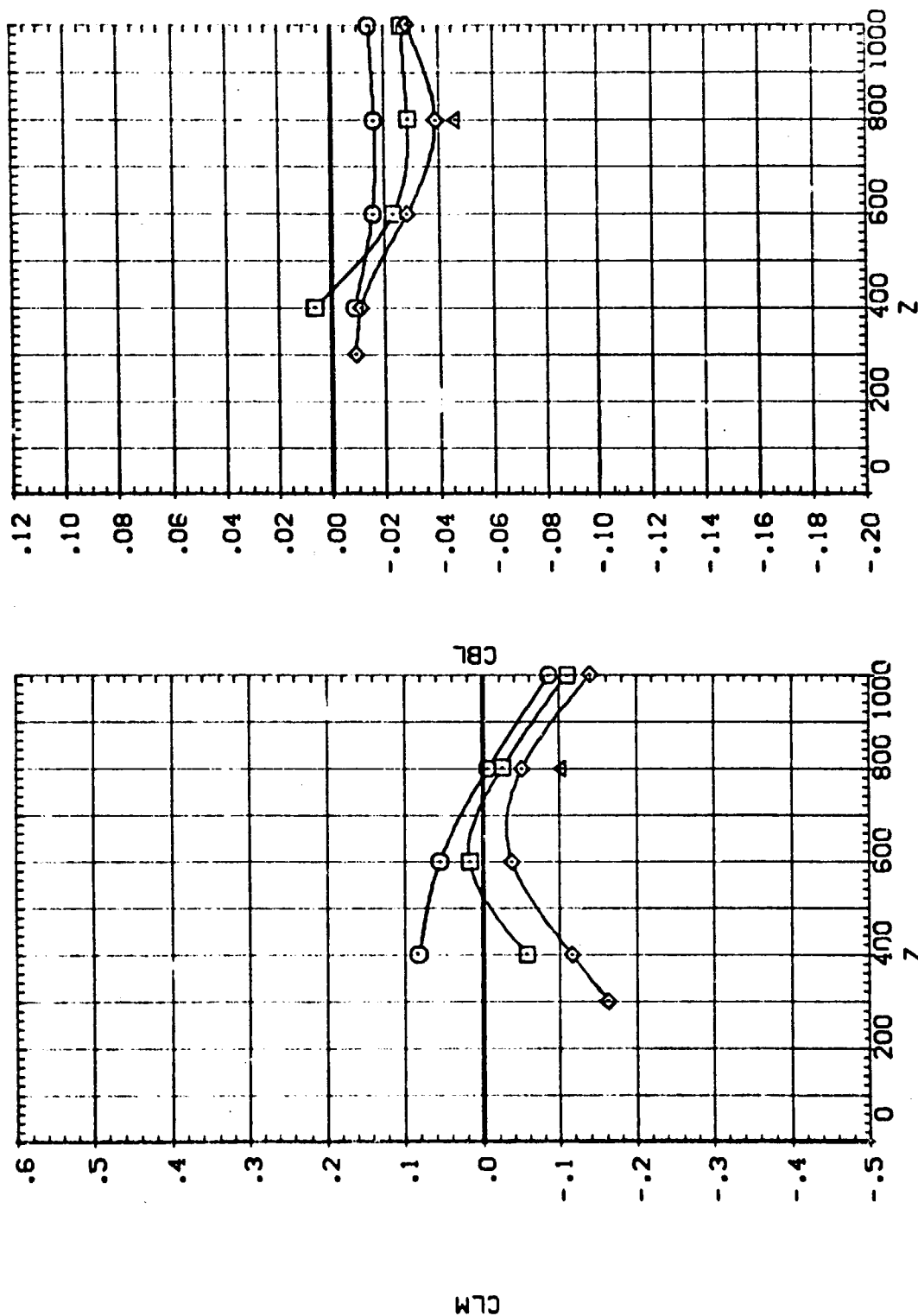


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ241)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|---------|----------|
| | | | 4.510 | PTOTL | 28.900 | 5.000 |
| ○ | 200.800 | ALPHA | .000 | BETA | -20.000 | 1500.000 |
| ◇ | 401.690 | DALPHA | .000 | PC+PB | | |
| △ | 801.920 | X | | | | |

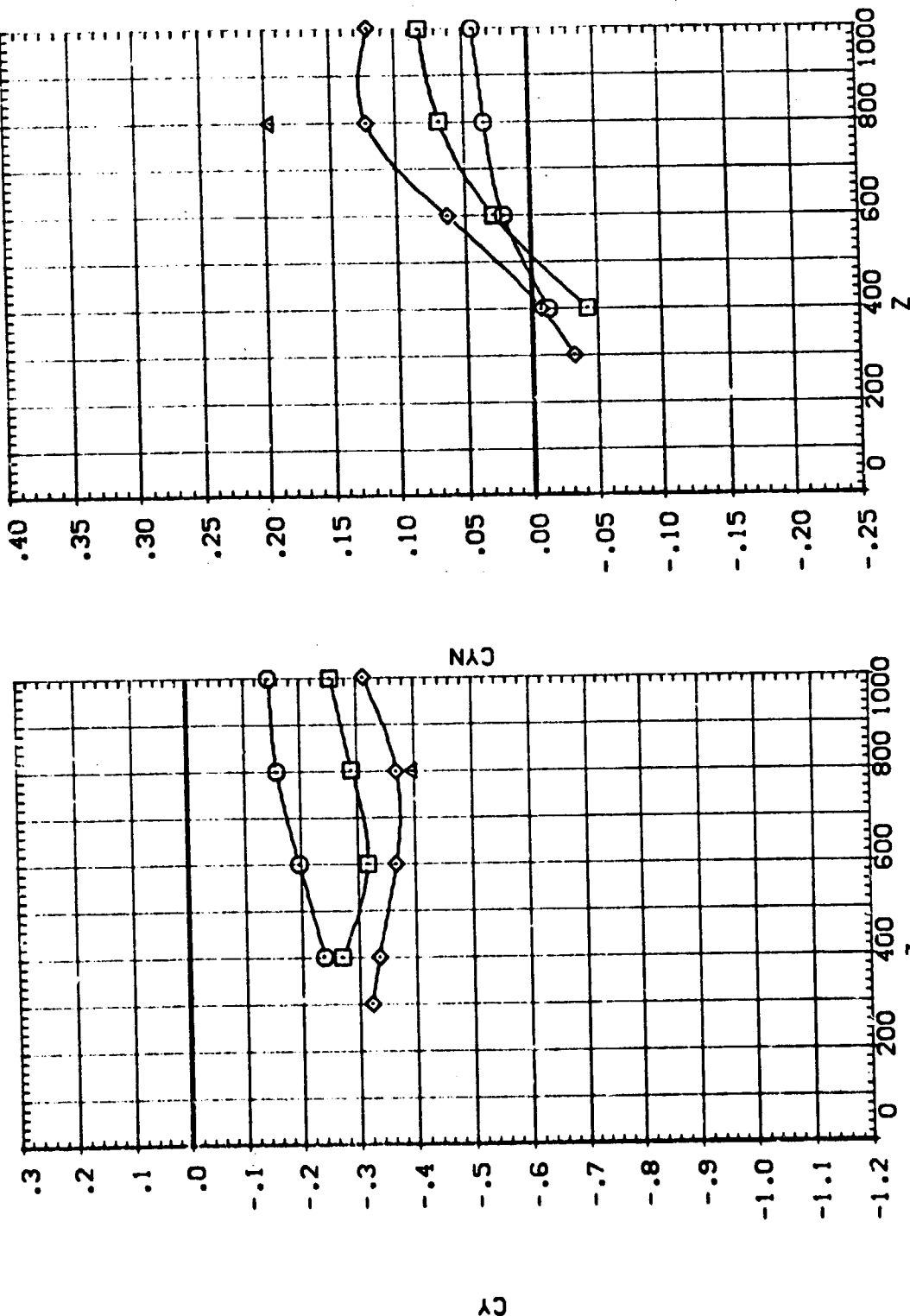


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

!A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ241)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTL | 28.900 |
|--------|---------|------|-------------------|----------|--------|
| ○ | 200.800 | .000 | BETA | 5.000 | |
| □ | 401.890 | .000 | DBETA | -20.000 | |
| ◇ | 801.920 | .000 | PC-HB | 1500.000 | |
| △ | | | X | | |

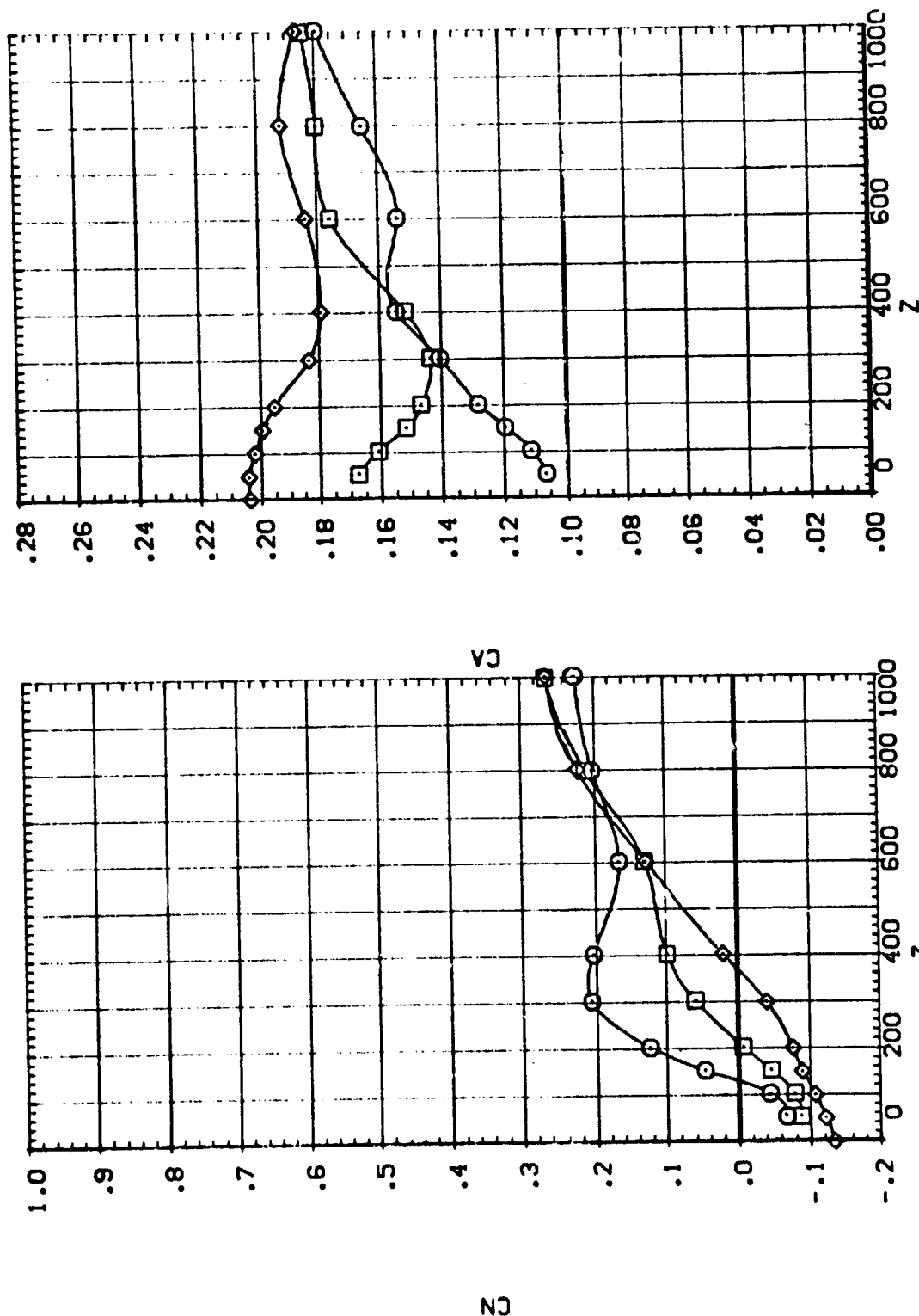


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ242)

| | | | | | | | | | | |
|--------|---|------|-------------------|-------|------|-------|--------|-------|---|-------|
| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | | | | | |
| | | | ALPHA | PTOTL | BETA | PC+P8 | | | | |
| | | | | | | | DALPHA | DBETA | | |
| | | | | | | | | | X | 5.000 |
| | | | | | | | | | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

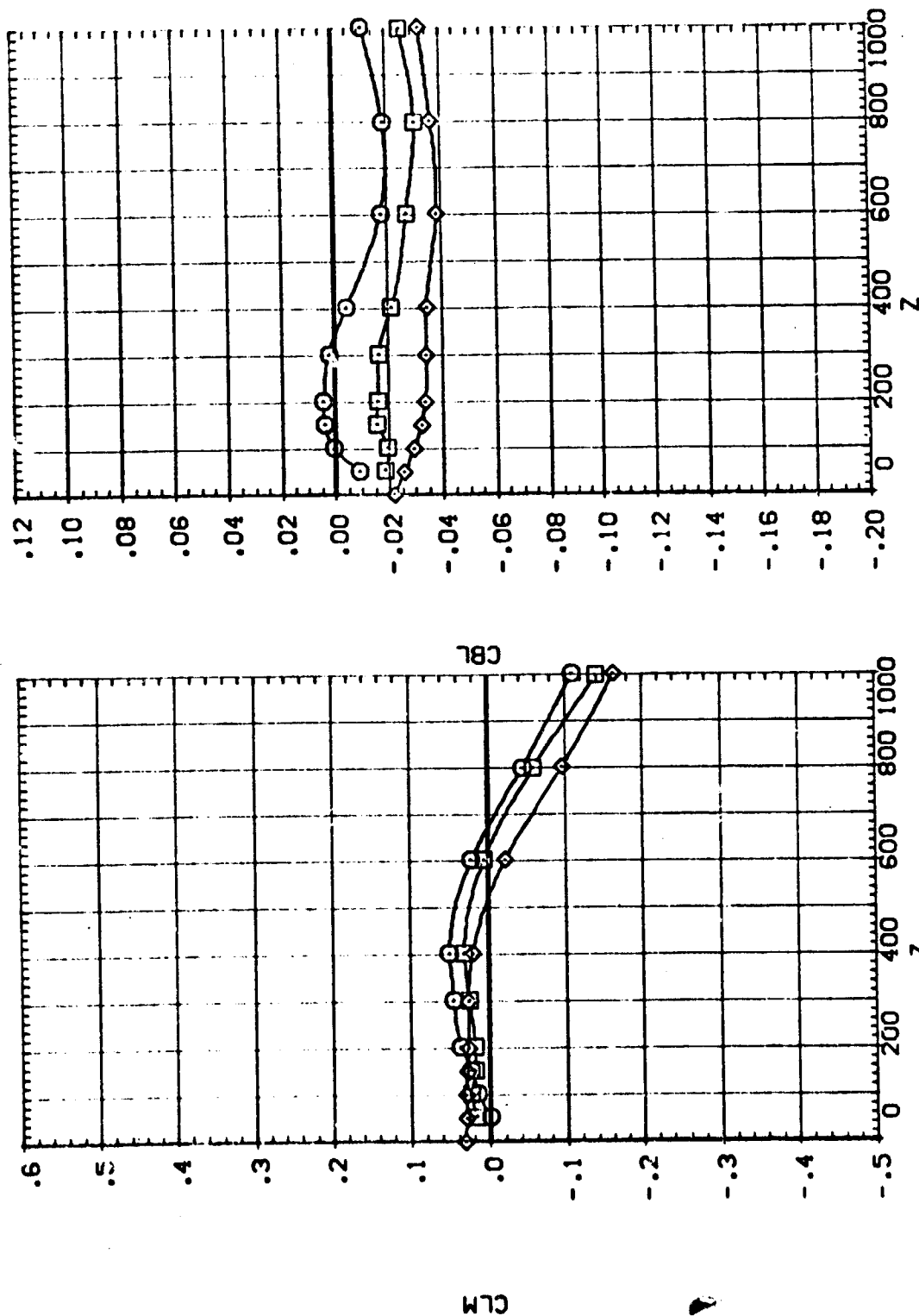


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ242)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|--------|------|----------|
| | MACH | PTOTL | BETA | PCMB |
| ○ | -.098 | 4.510 | .000 | 28.500 |
| □ | 199.340 | .000 | DETA | 5.000 |
| ◇ | 398.700 | -5.000 | PCMB | 1500.000 |

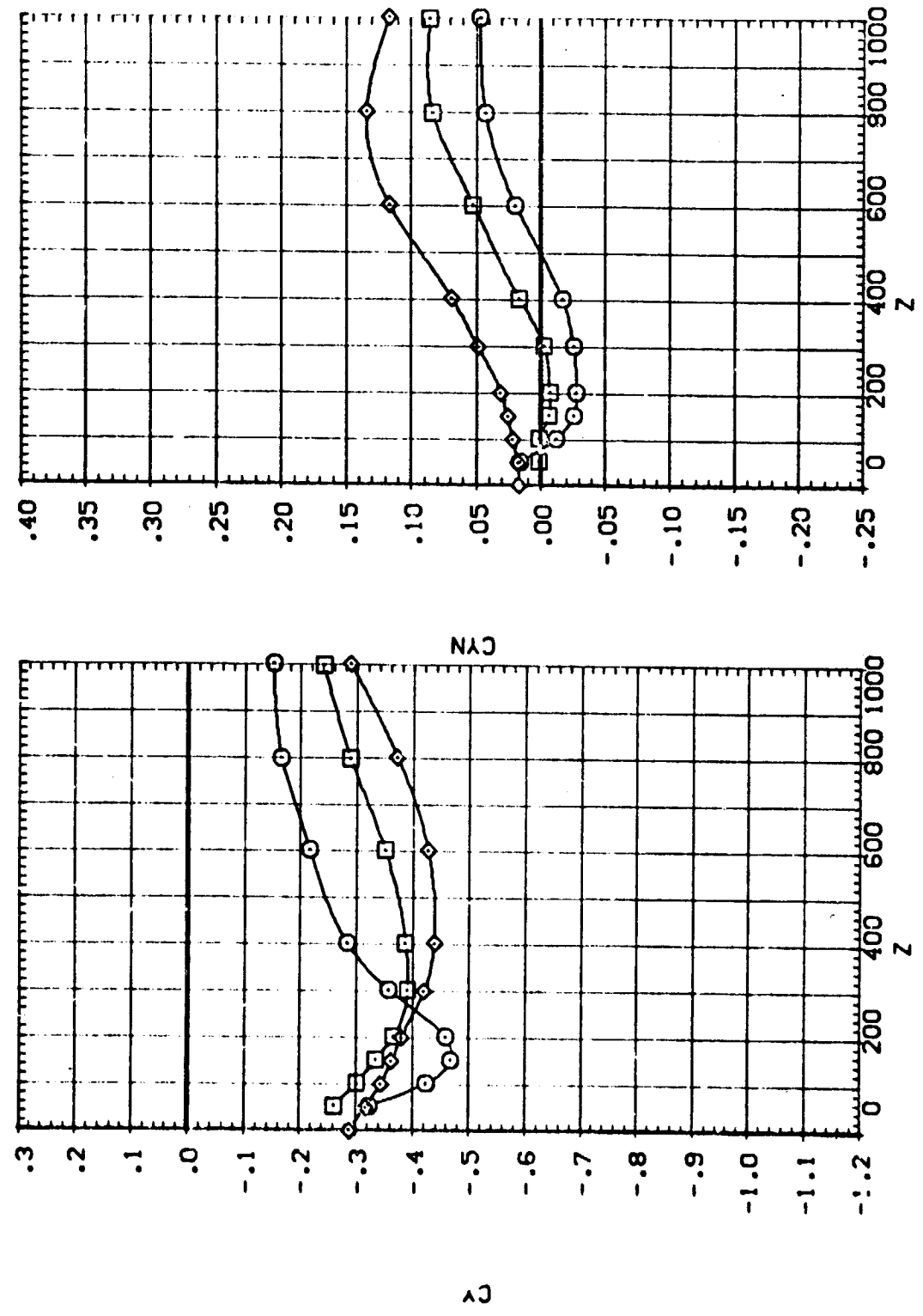


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ242)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|----------|------|-------|-------|
| | | MACH | PTOTL | BETA | DBETA | PC-MB |
| ○ | -0.098 | 4.510 | 28.900 | | | |
| □ | 199.340 | .000 | 5.000 | | | |
| ◇ | 398.700 | -5.000 | 5.000 | | | |
| | X | .000 | 1500.000 | | | |



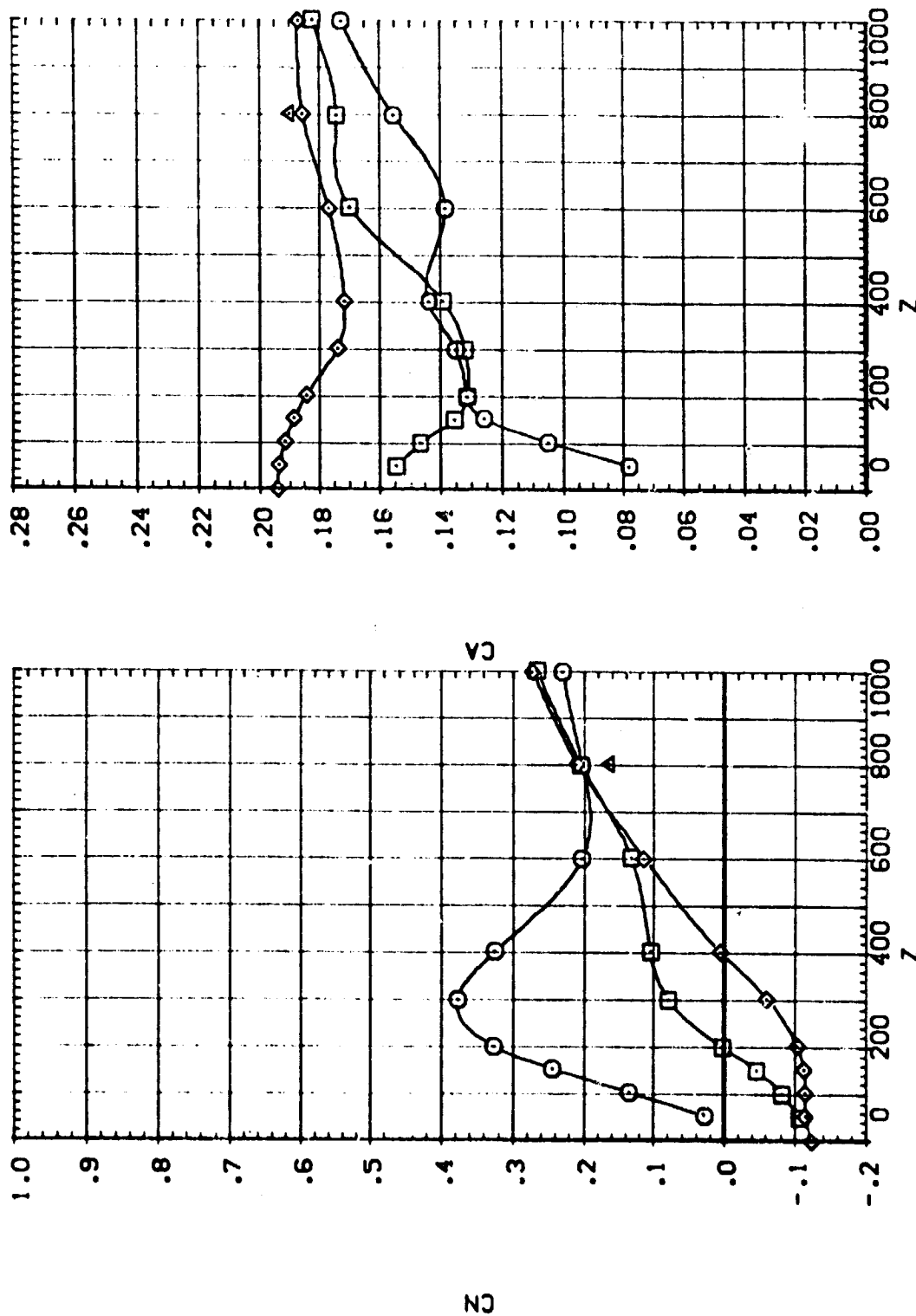
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA'3.SRB(S8)WITH PLUMES SEPARATING FROM 39T10 (RTJ243)

SYMBOL
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 Y MACH 4.510 P10TL 28.900
 198.690 ALPHA .000 BETA 5.000
 401.150 DAPHA -5.000 DBETA .000
 800.670 X PC#8 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ243)

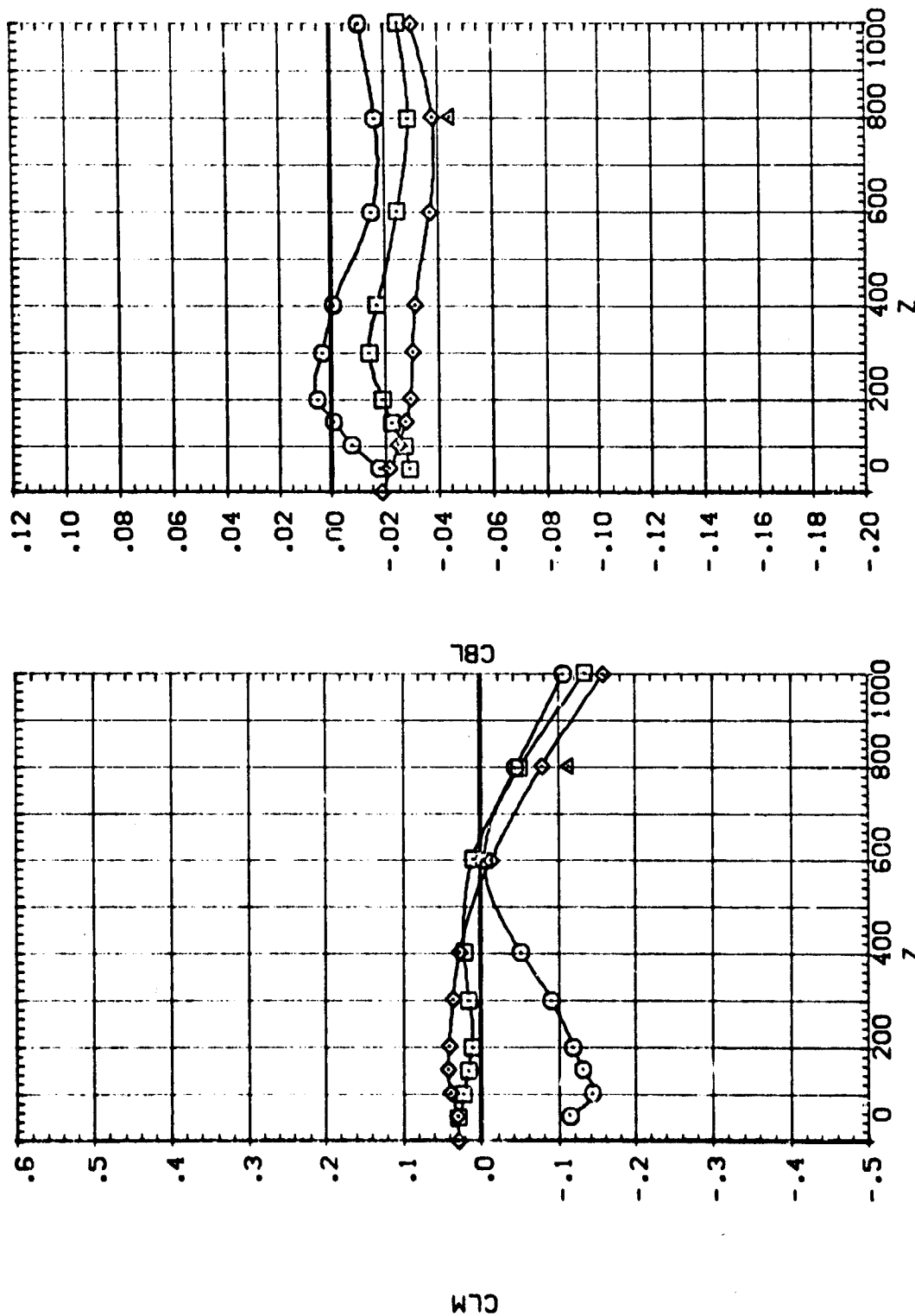
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

Y 1.627 MACH 4.510 PTOTL 28.900
198.690 ALPHA .000 BETA 5.000
401.150 DALPHA -5.000 DBETA .000
2'0.670 X .000 PC4#B 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



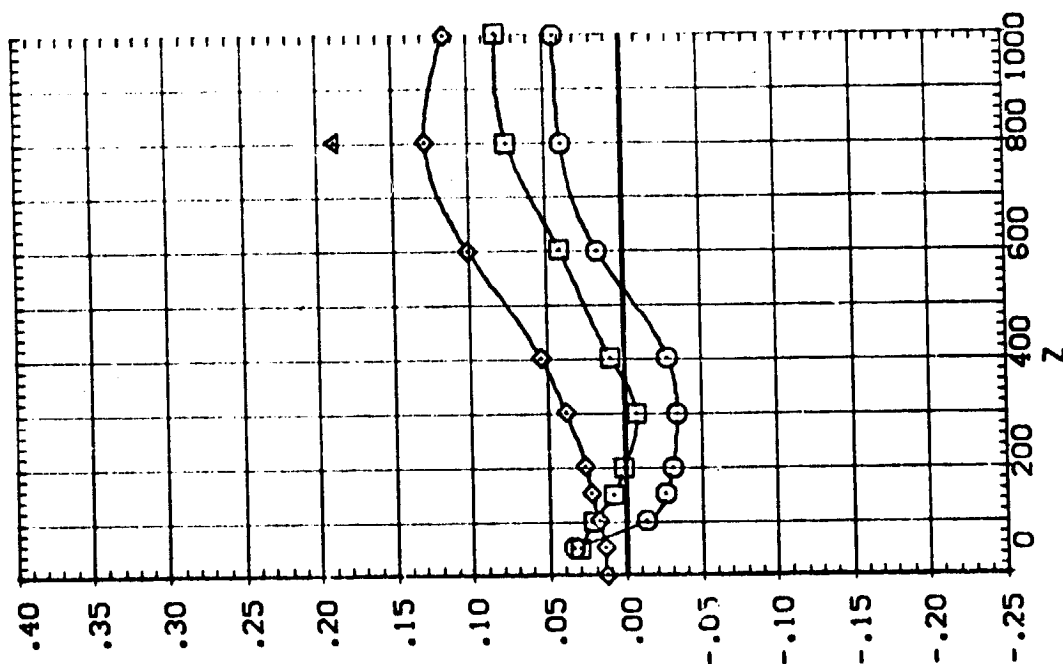
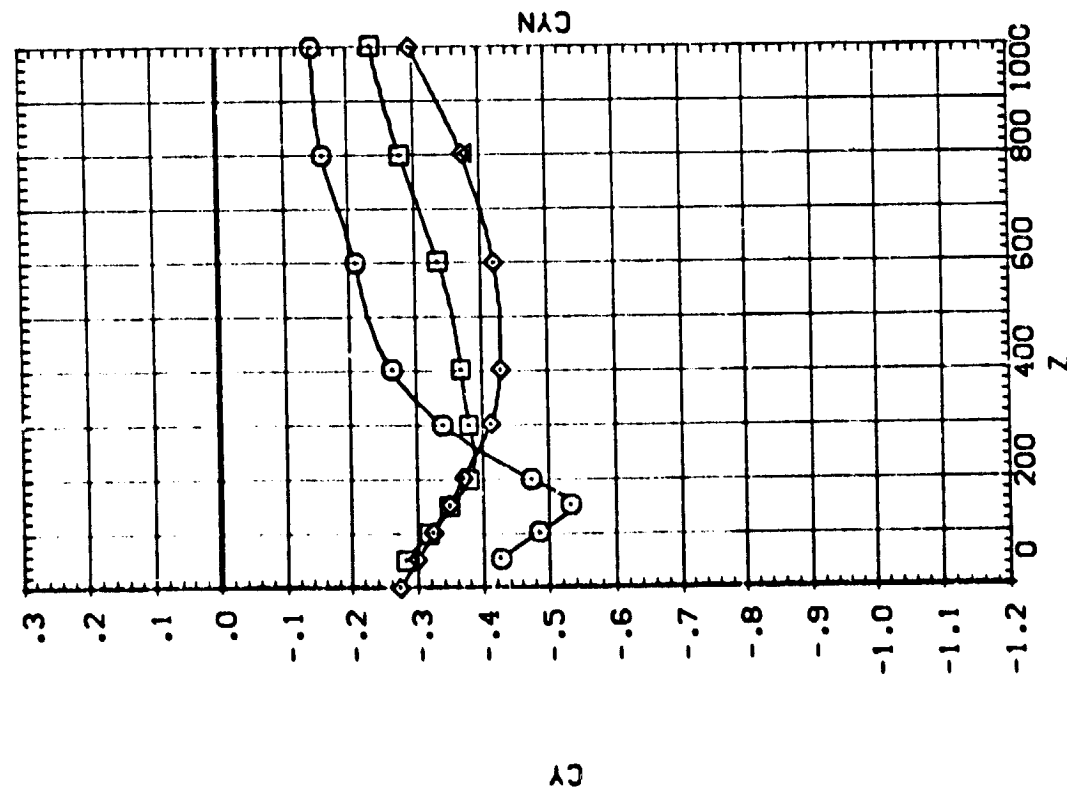
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ243)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 1.627 |
| MACH | 4.510 |
| PIOTL | 28.900 |
| ALPHA | .000 |
| BETA | 5.000 |
| DBETA | .000 |
| PC-HB | 1500.000 |

SYMBOL
○ □ ◇ △

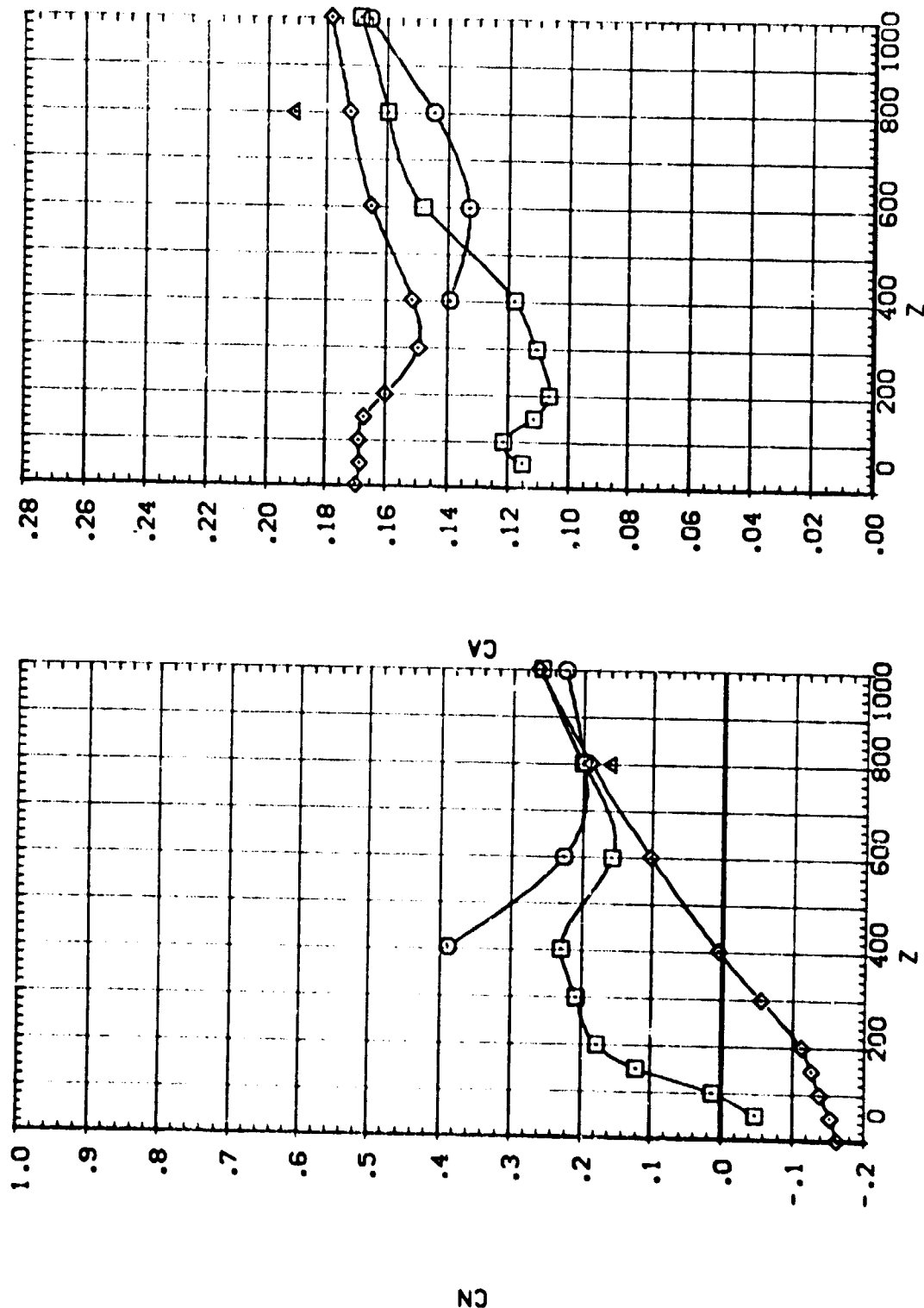


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ244)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | P10T1 | 28.900 | |
| ○ | 200.060 | ALPHA | .000 | BETA | 5.000 | |
| □ | 399.400 | DALPHA | -5.000 | DBETA | -5.000 | |
| ◇ | 600.070 | X | .000 | PC+PB | 1500.000 | |

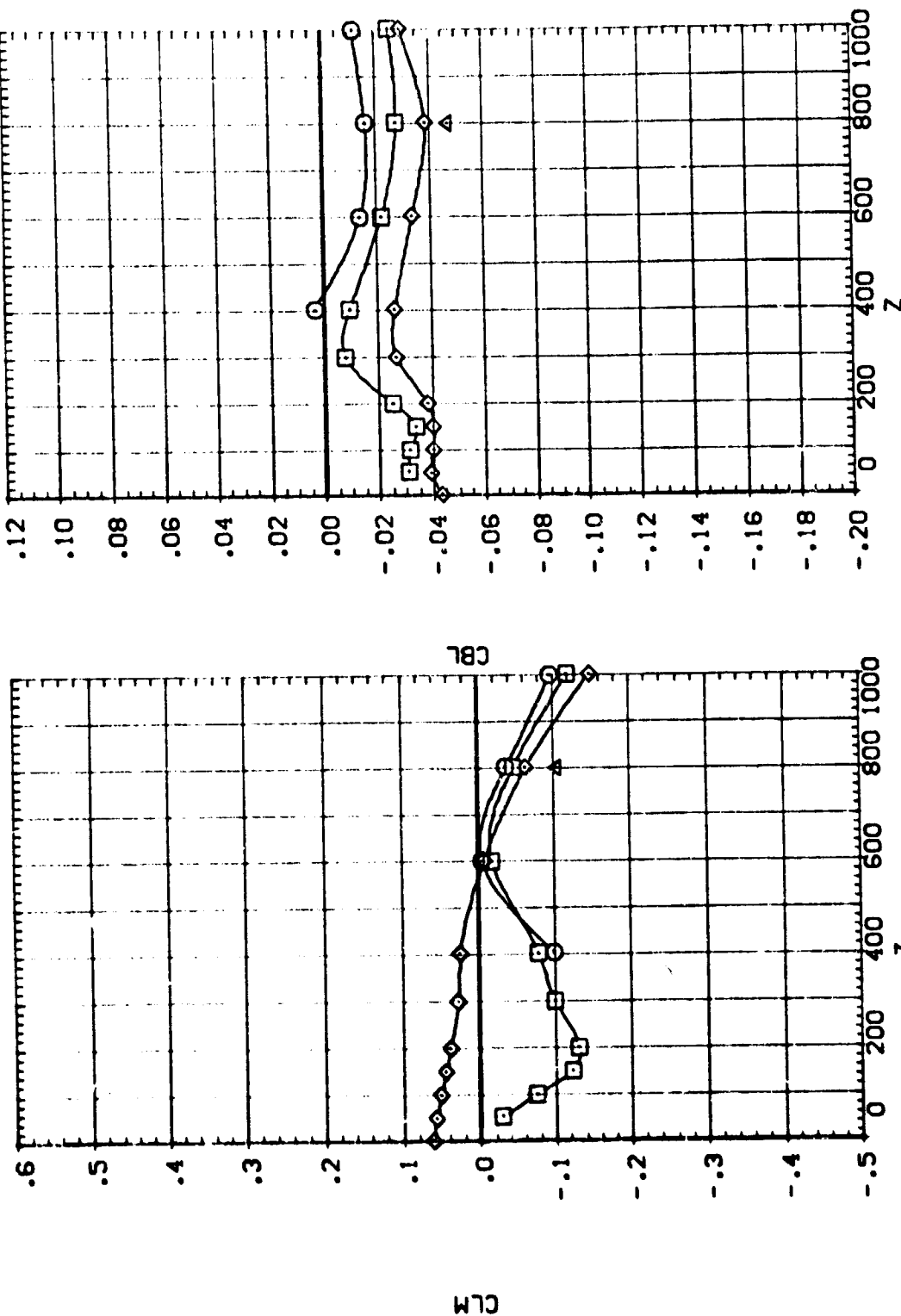


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ244)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | -0.035 |
| MACH | 4.510 |
| PTOTL | 28.900 |
| ALPHA | .000 |
| BETA | 5.000 |
| DBETA | -5.000 |
| PC-H8 | 1500.000 |

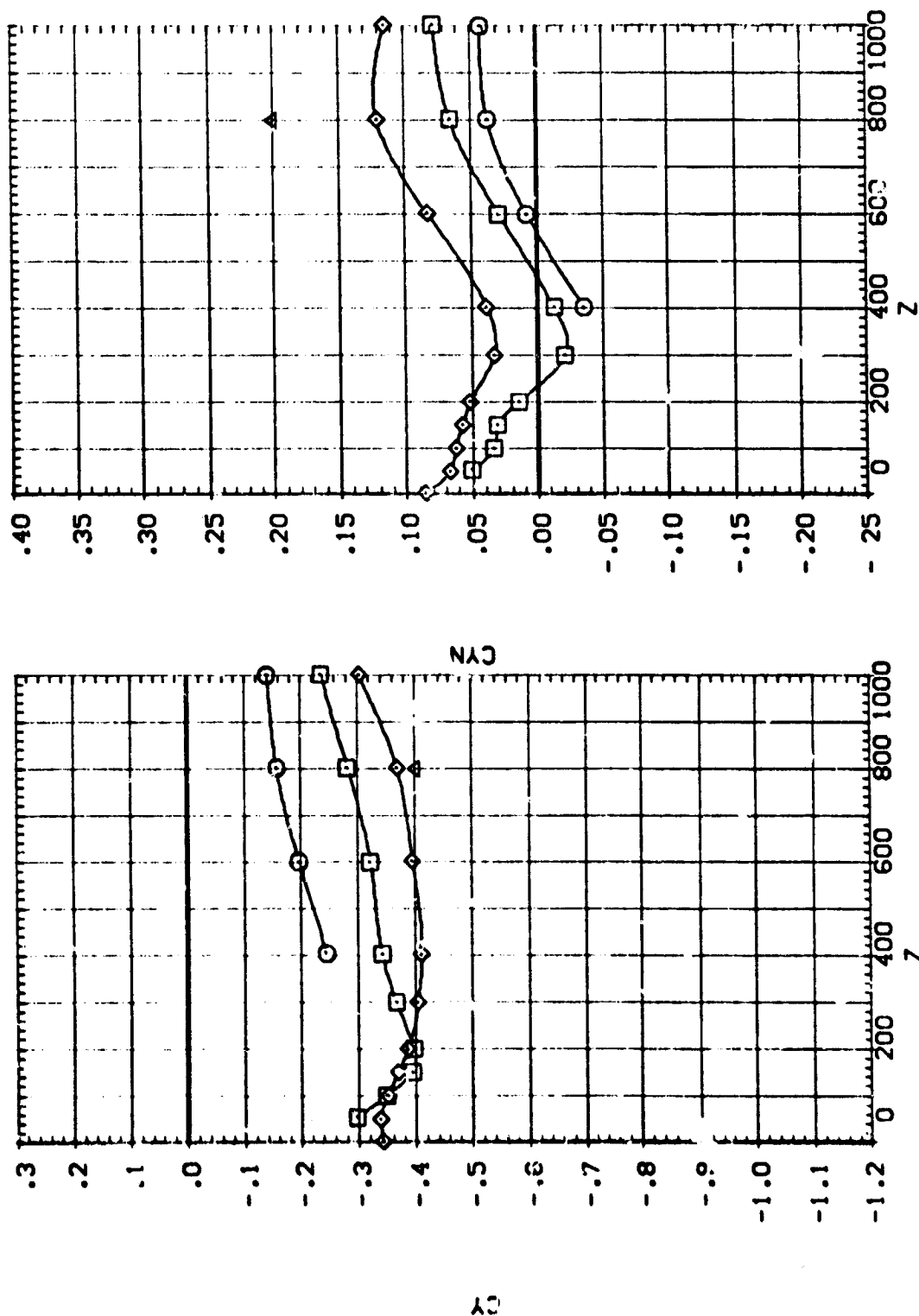


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ244)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

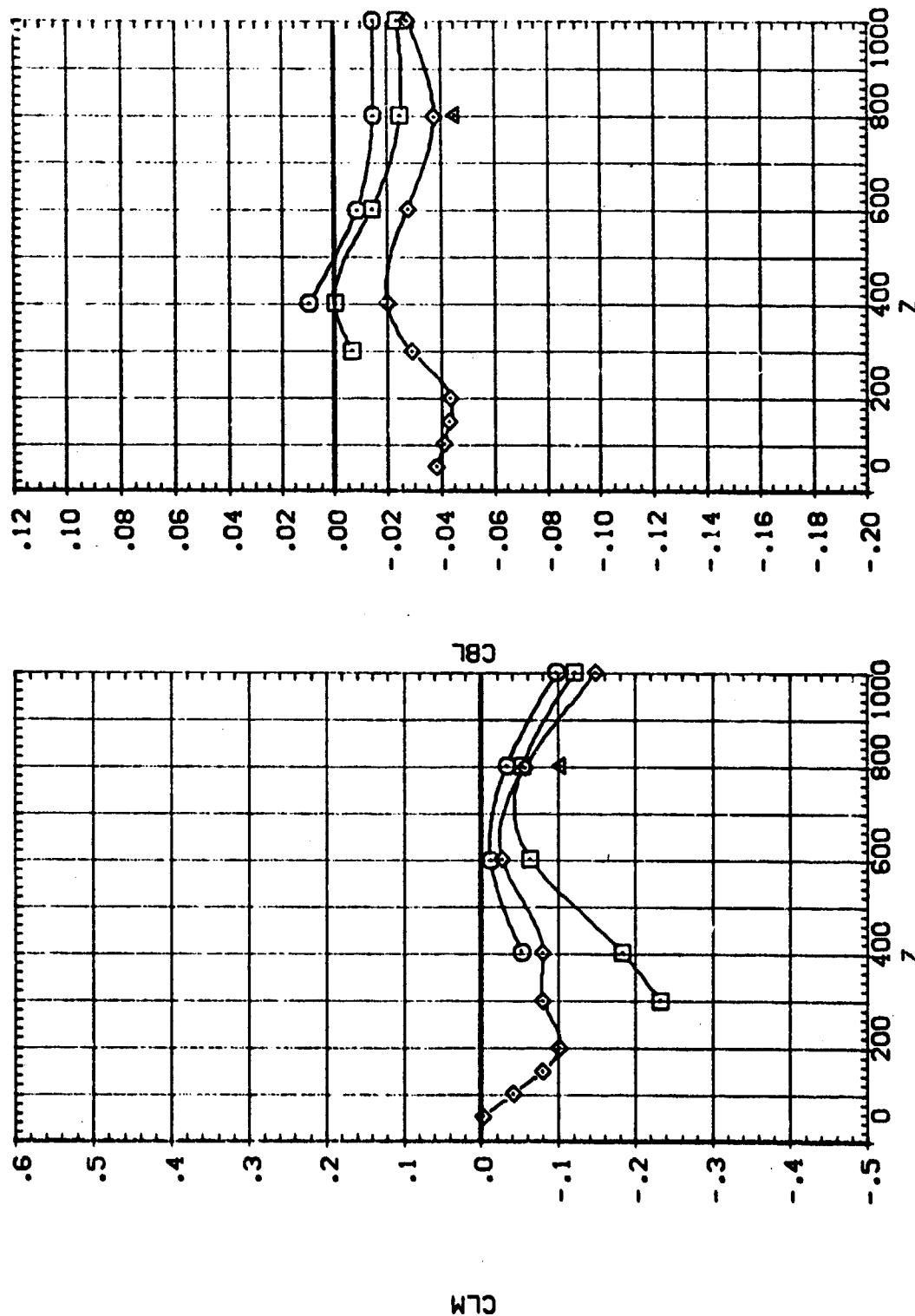
| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|--------|-------|----------|
| | V | MACH | PTOTL | 28.900 |
| ○ | -0.035 | 4.510 | BETA | 5.000 |
| □ | 200.060 | .000 | DBETA | -5.000 |
| ◇ | 399.400 | -5.000 | PC+PB | 1500.000 |
| △ | 800.070 | X | | |



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ245)

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.890 | ALPHA | .000 | BETA | 5.000 | |
| □ | 400.640 | DALPHA | -5.000 | DBETA | -10.000 | |
| ◇ | 799.640 | X | .000 | PC+PB | 1500.000 | |

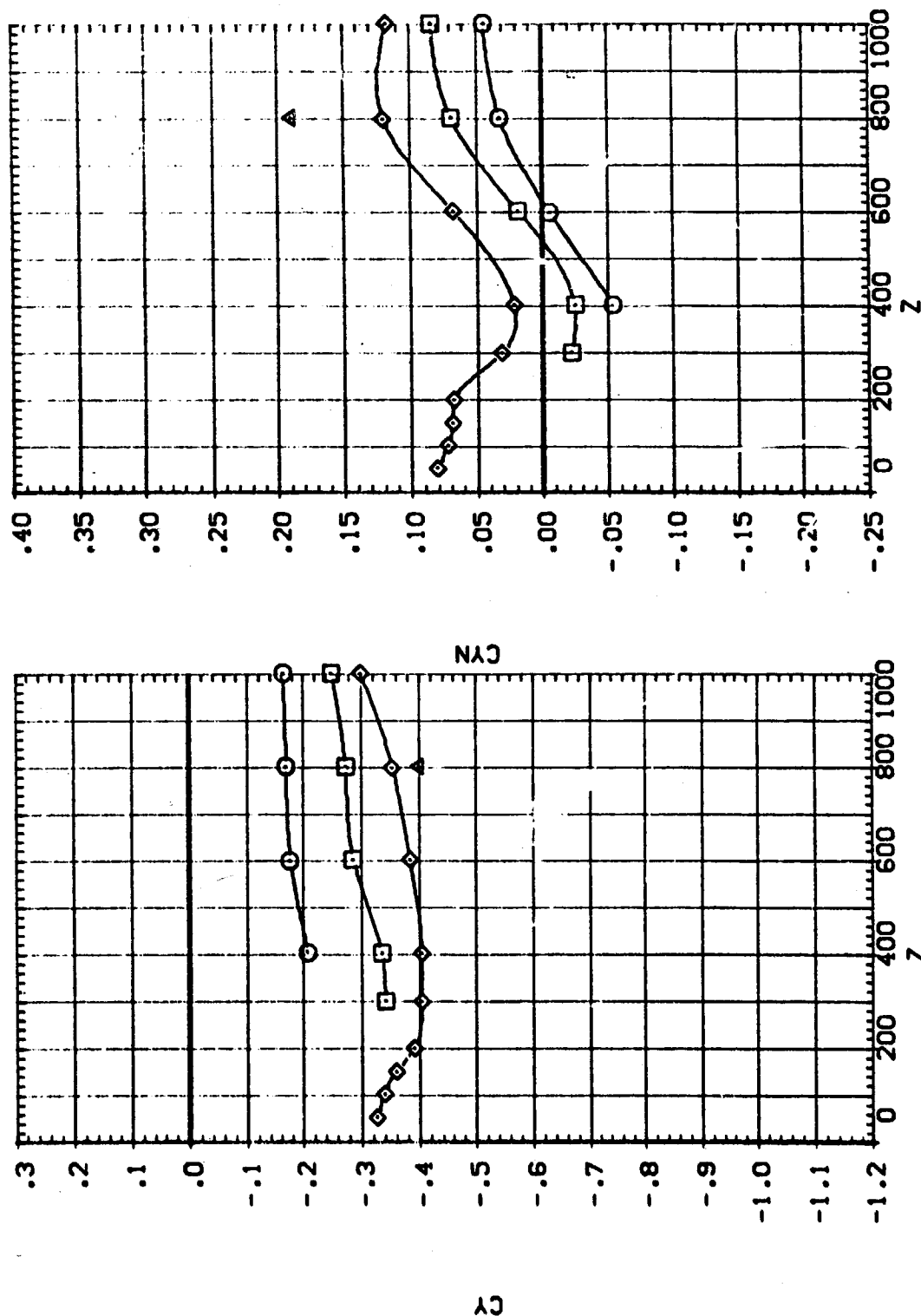
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ245)

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|-------|----------|--|
| | | MACH | 4.510 | PIOTL | 28.900 | |
| ○ | 200.890 | ALPHA | .000 | BETA | 5.000 | |
| □ | 400.640 | DBETA | -5.000 | PC+18 | -10.000 | |
| ◇ | 799.640 | X | .000 | | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



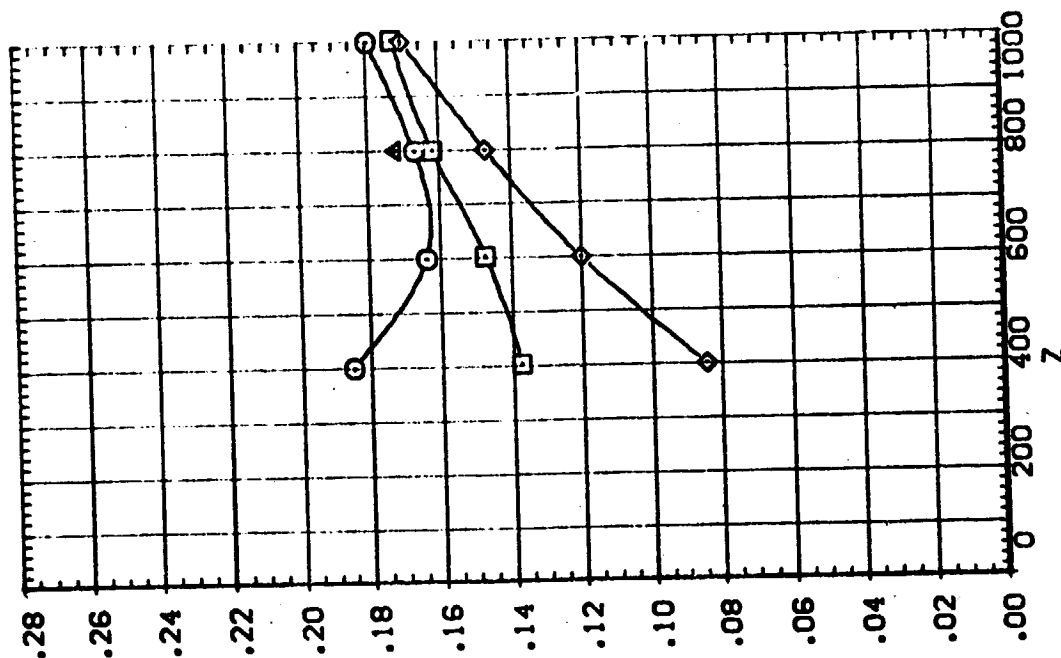
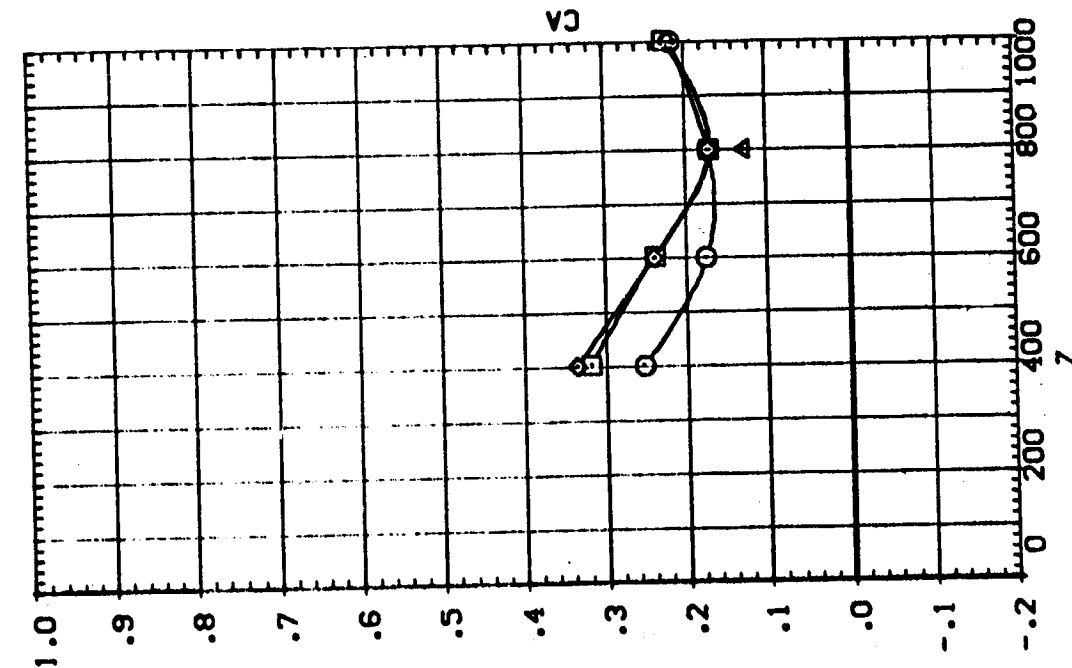
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ246)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| Y | MACH | PARAMETRIC VALUES | 28.900 |
|---------|--------|-------------------|----------|
| -1.492 | 4.510 | PTOTL | 5.000 |
| 200.660 | .000 | BETA | -20.000 |
| 400.590 | -5.000 | DBETA | 1500.000 |
| 800.830 | .000 | PC+PB | |
| | X | | |

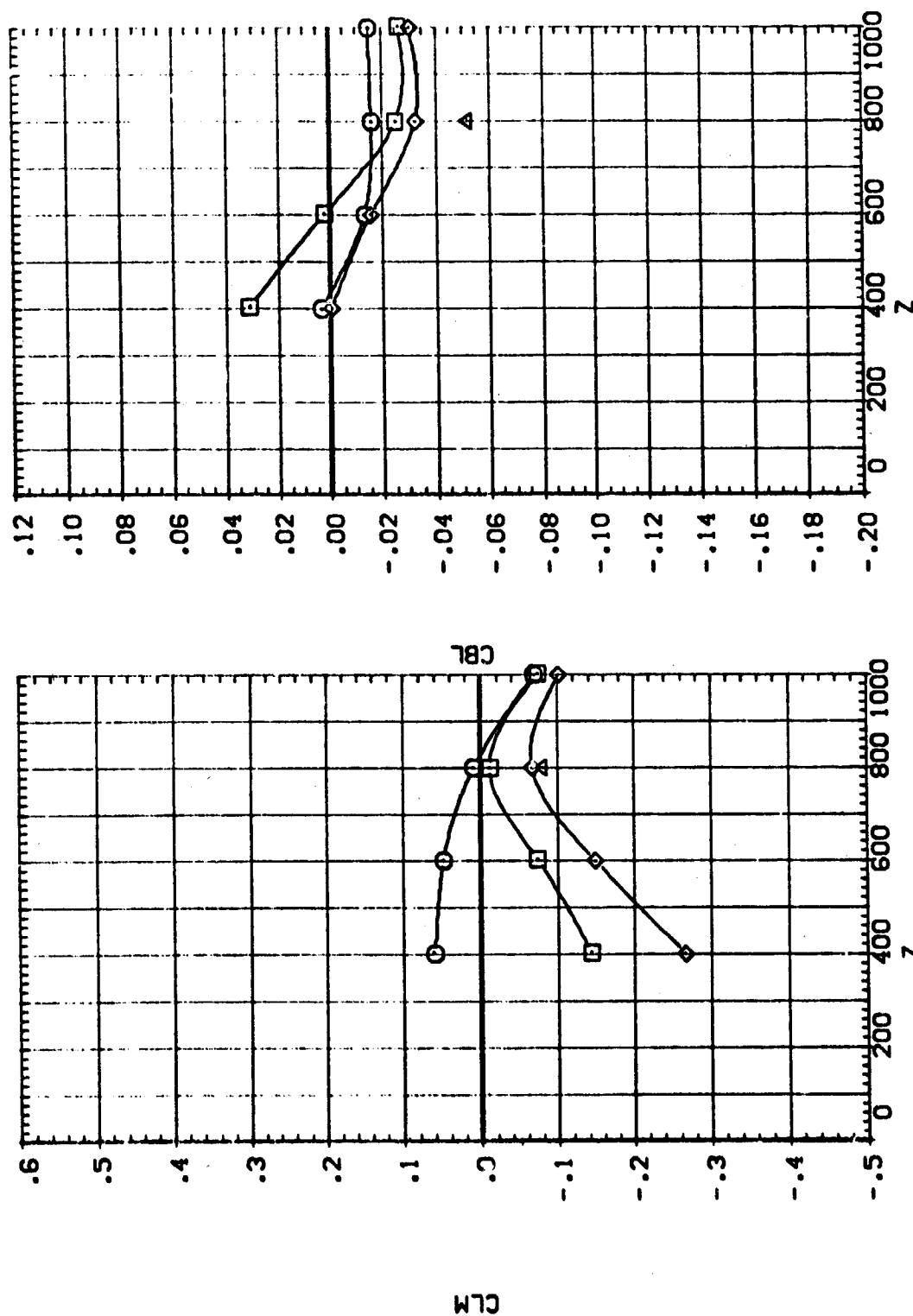
SYMBOL
○ □ ◇ △



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ246)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|------|
| | | MACH | PTOTL | BETA | PCWB |
| ○ | -1.492 | 4.510 | 28.900 | | |
| □ | 200.660 | .000 | 5.000 | | |
| ◇ | 400.590 | -5.000 | -20.000 | | |
| △ | 800.930 | .000 | 1500.000 | | |

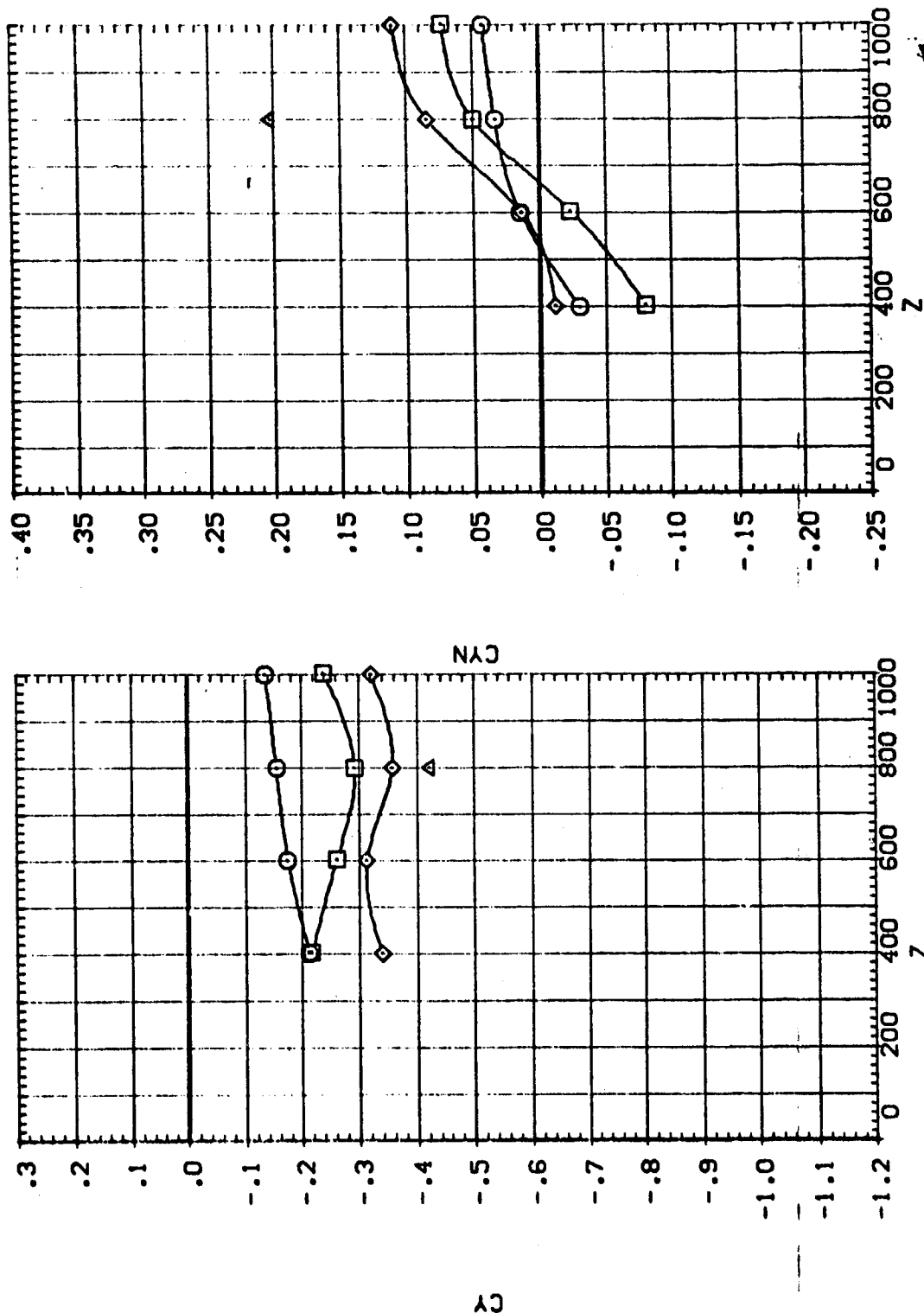


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ246)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|----------|
| | | MAOH | PTOTL | BETA | PC448 |
| ○ | -1.492 | 200.660 | 4.510 | .000 | 28.900 |
| □ | 200.660 | 400.590 | -5.000 | .000 | 5.000 |
| ◇ | 400.590 | 800.930 | .000 | .000 | -20.000 |
| △ | 800.930 | | | | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RTJ247)

SYMBOL

Y

○

□

◇

200.300
400.510

MACH
ALPHA

.153
X

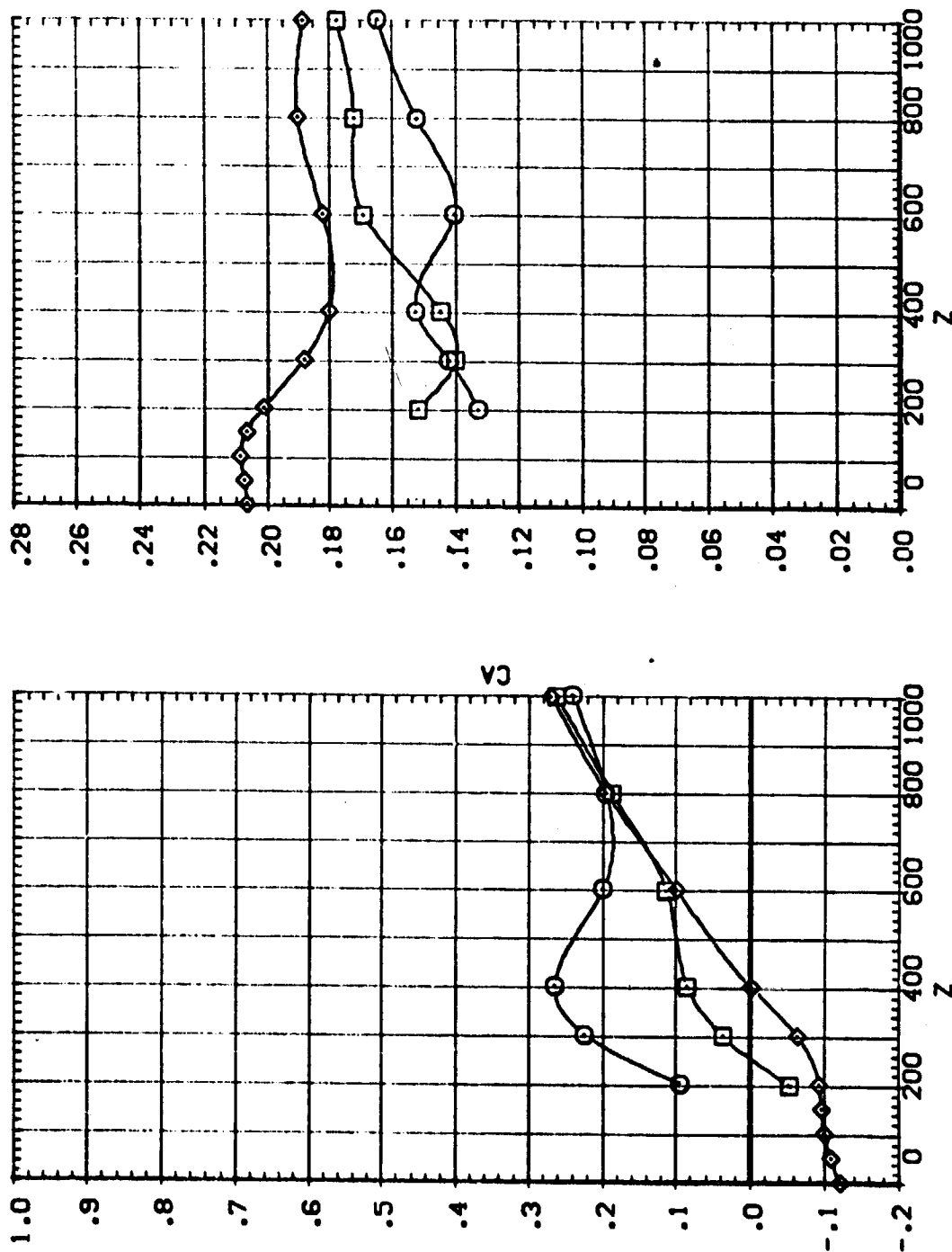
PARAMETRIC VALUES

4.510
-10.000
.000

PIDTL
BETA
DBETA
PC-HB

28.900
5.000
5.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

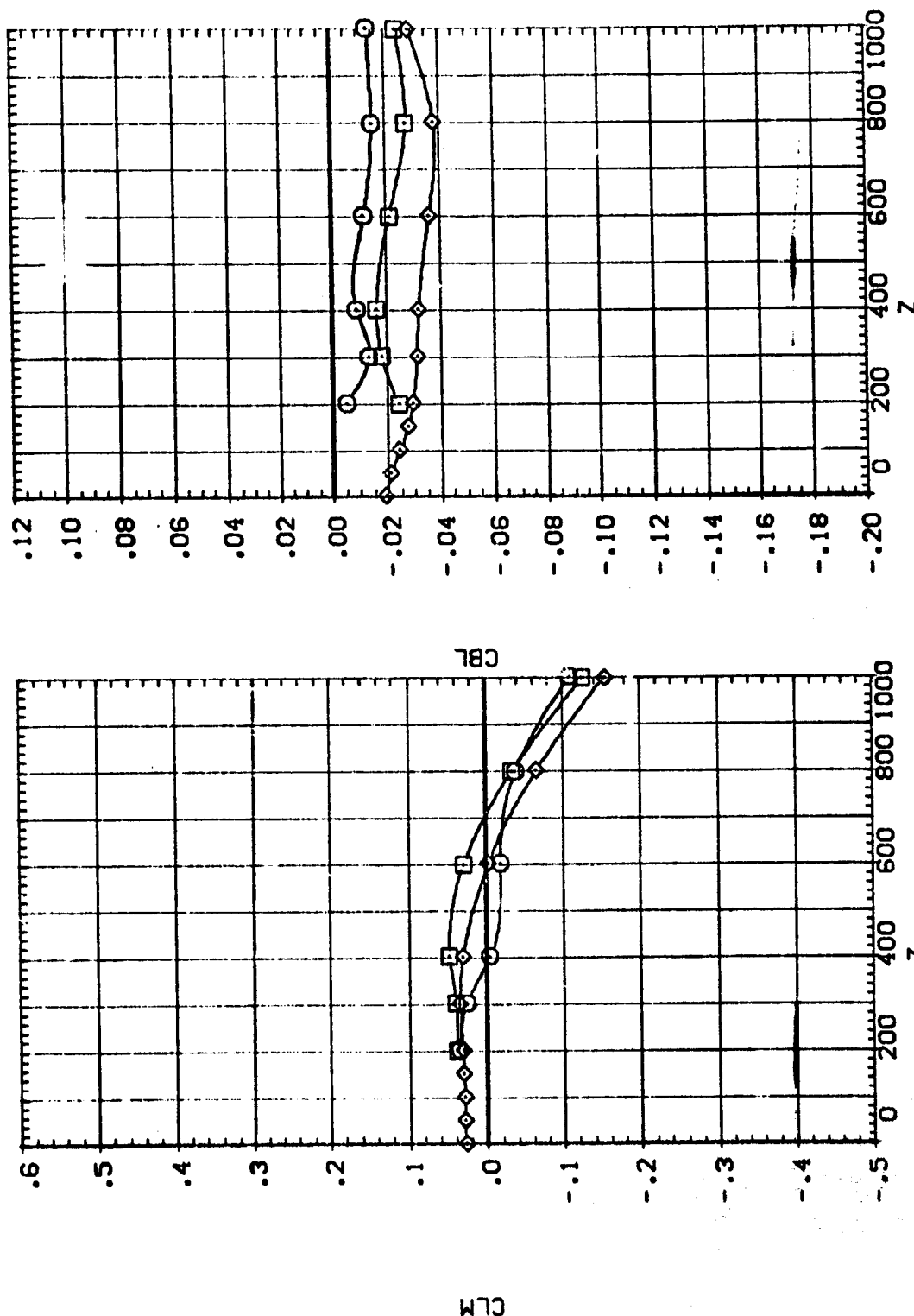


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ247)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PTOTL | 28.900 |
|--------|---------|---------|-------|----------|
| ○ | .153 | 4.510 | BETA | 5.000 |
| □ | 200.300 | .000 | BETA | 5.000 |
| ◇ | 400.510 | -10.000 | PCMB | 1500.000 |
| | | X | | |

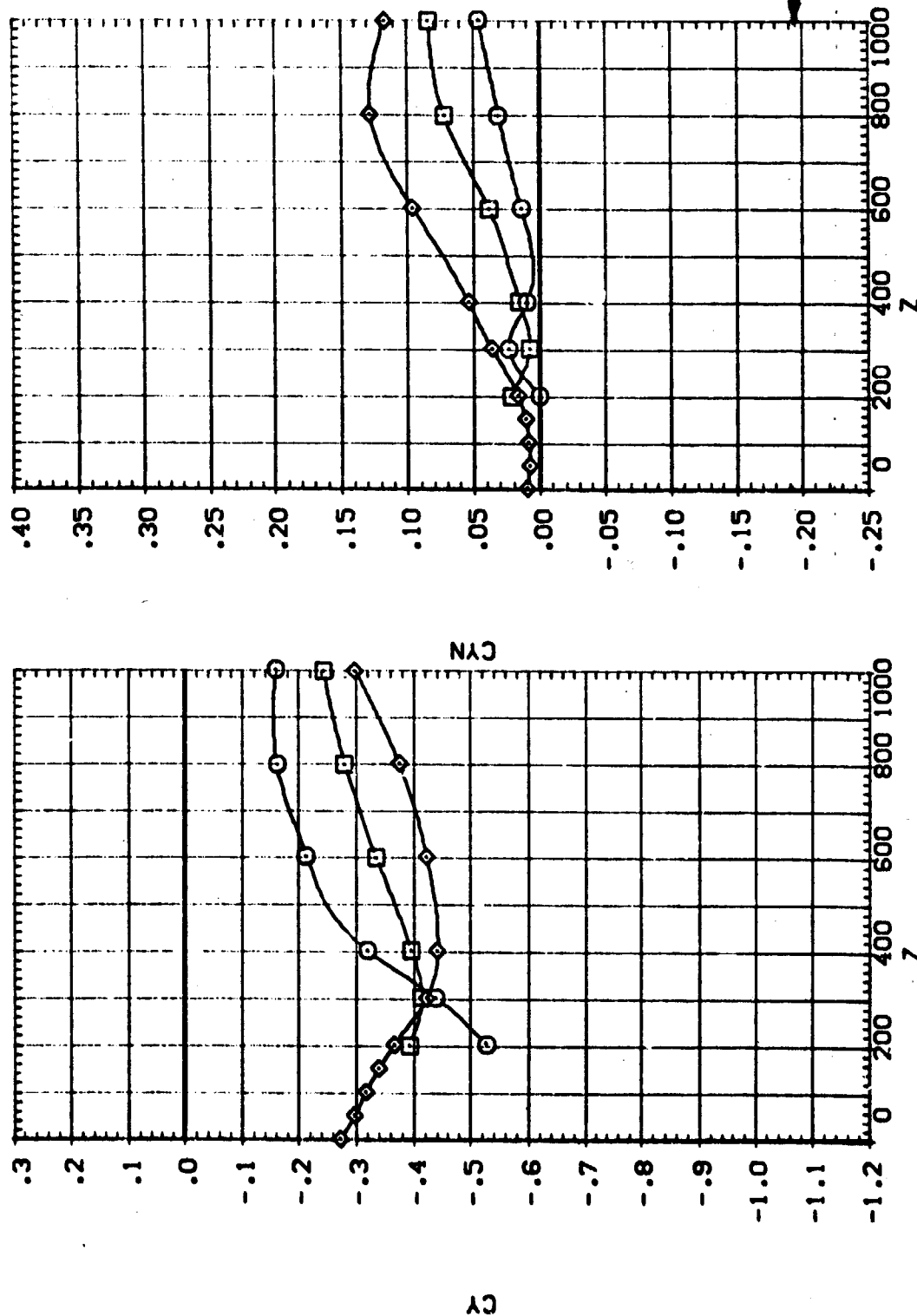


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ247)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.300 | ALPHA | .000 | BETA | 5.000 | |
| □ | 400.510 | DALPHA | -10.000 | DBETA | 5.000 | |
| ◇ | | X | .000 | PC+PB | 1500.000 | |

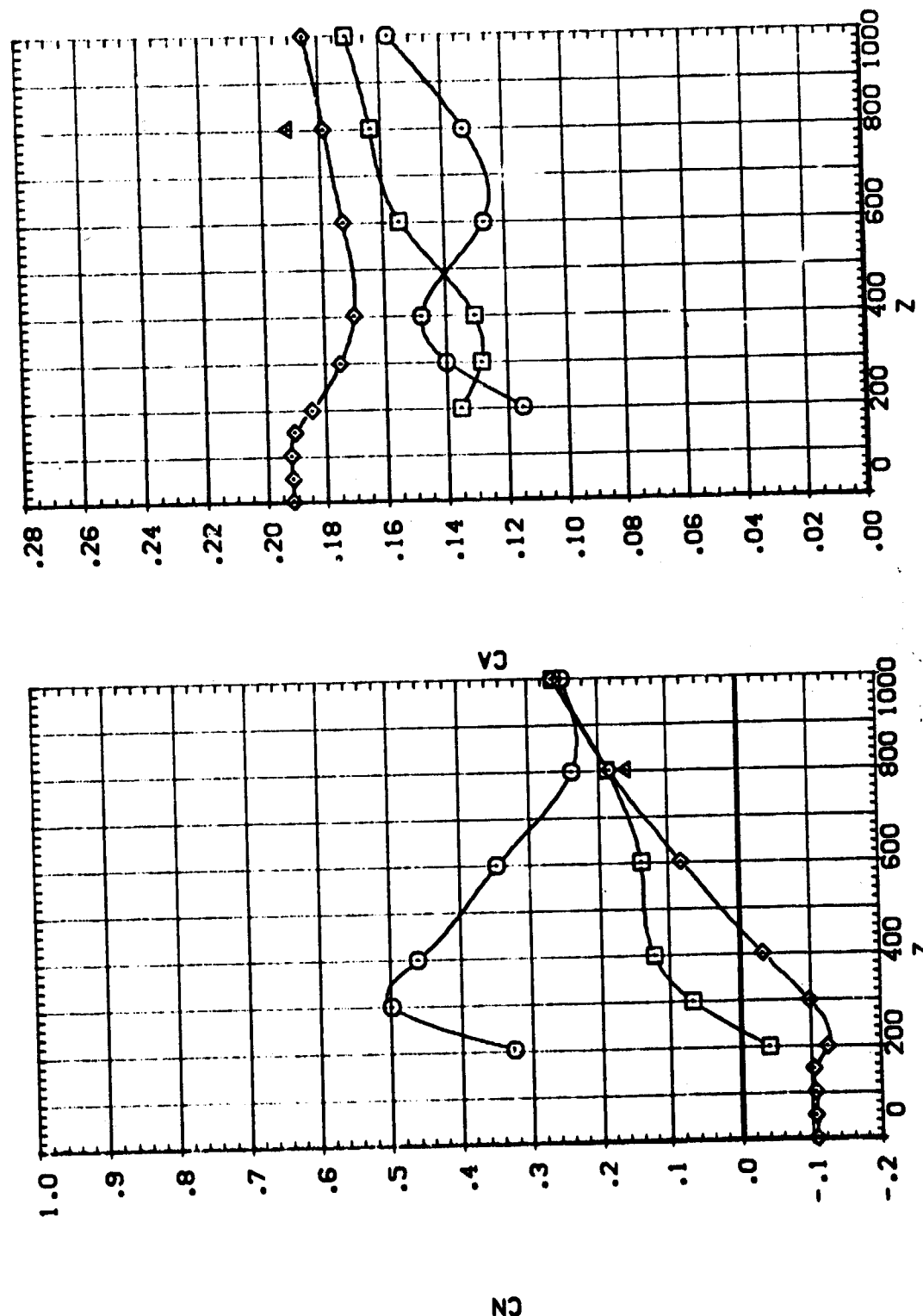


EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ248)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

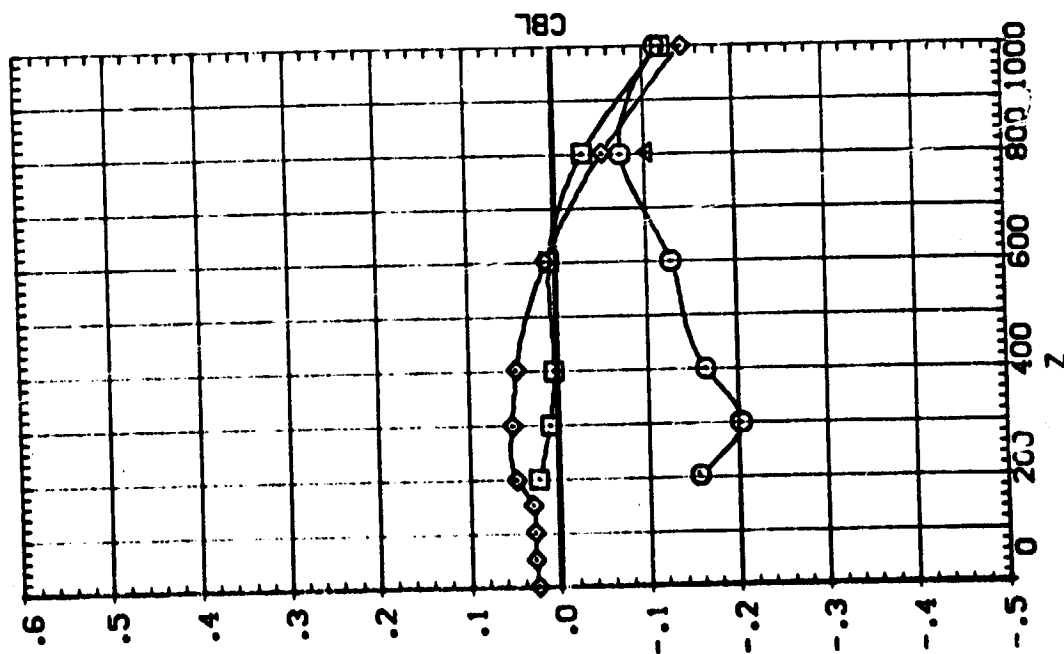
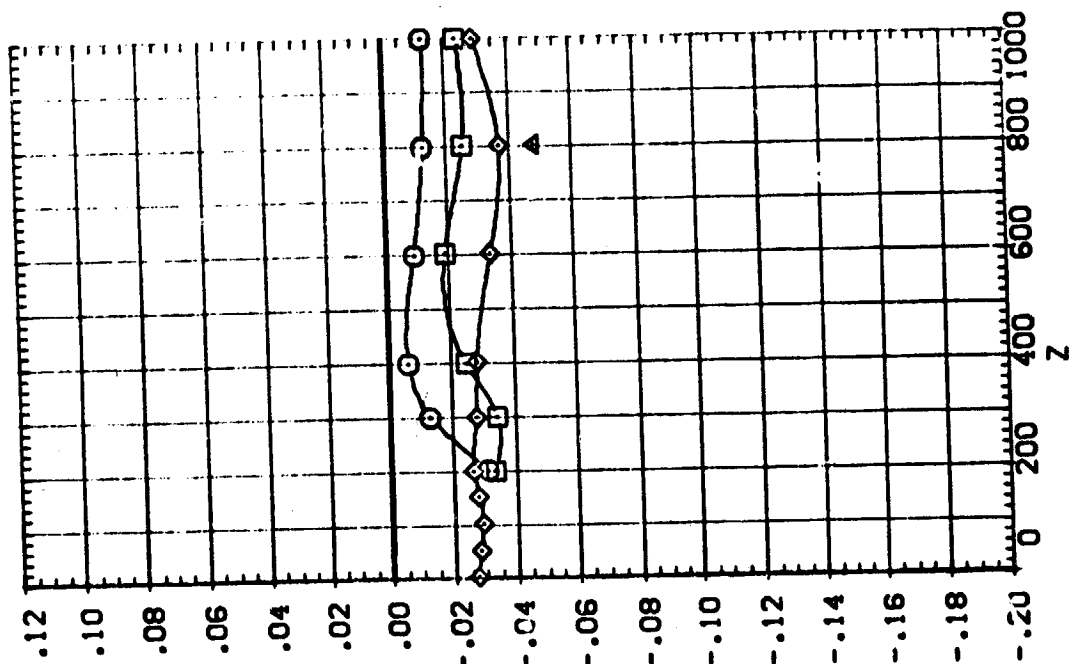
| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|--------|----------|
| | | | 4.510 | PTOTL | 28.900 | 5.000 |
| ○ | 200.170 | ALPHA | .000 | BETA | .000 | .000 |
| □ | 399.740 | DALPHA | -10.000 | DBETA | .000 | 1500.000 |
| ◇ | 800.810 | X | .000 | PC+PB | | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ248)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | 28.900 |
|--------|---------|---------|-------------------|----------|
| ○ | .883 | 4.510 | POTIL | 5.000 |
| □ | 200.170 | .000 | BETA | .000 |
| ◇ | 399.740 | -10.000 | DBETA | 1500.000 |
| △ | 800.810 | .000 | PC48 | |

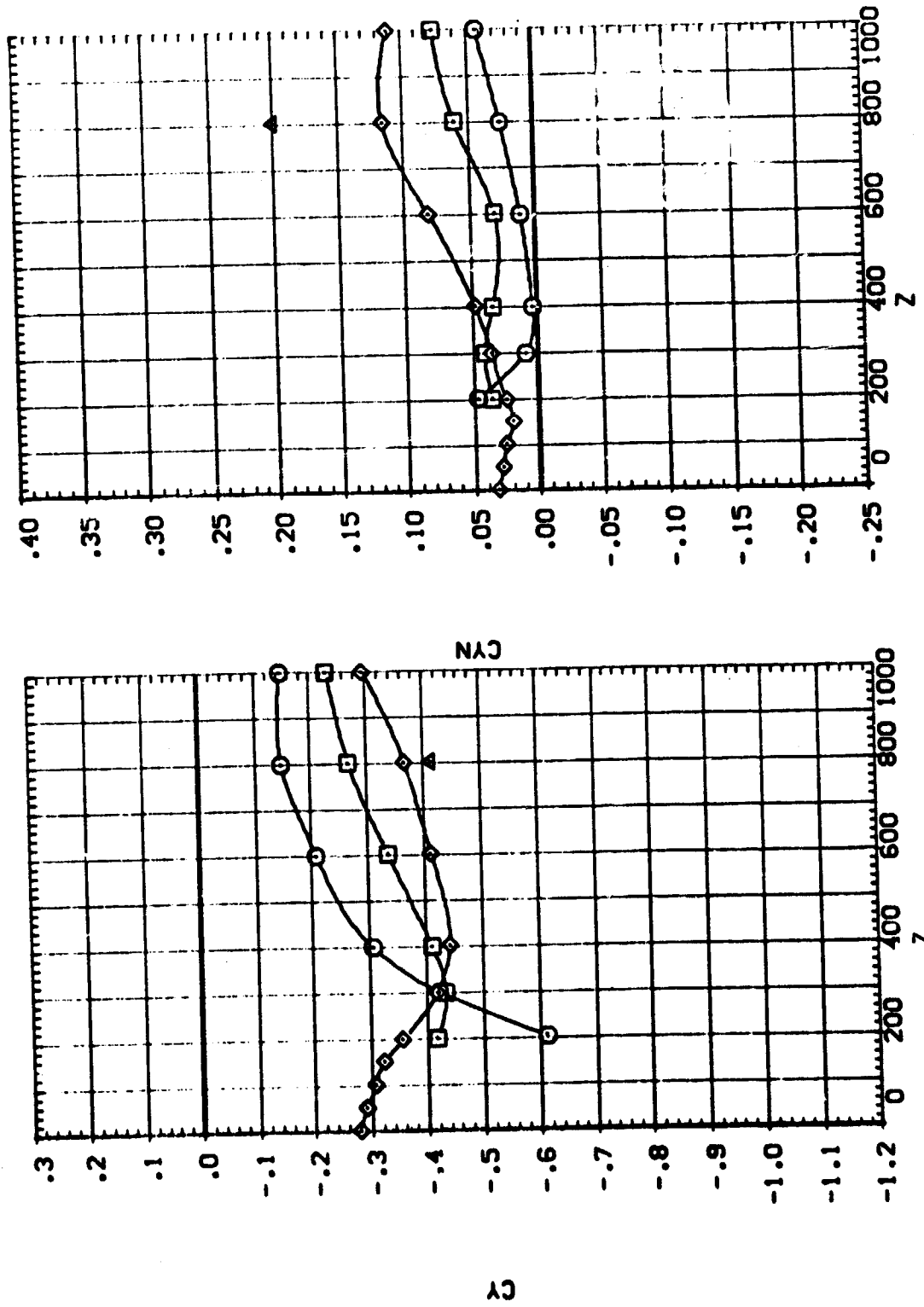


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ248)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | 28.900 |
|--------|---------|---------|-------------------|----------|
| ○ | .883 | 4.510 | POTIL | 5.000 |
| □ | 200.170 | .000 | BETA | .000 |
| ◇ | 399.740 | -10.000 | DBETA | 1500.000 |
| △ | 800.810 | .000 | PC-HB | |



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ249)

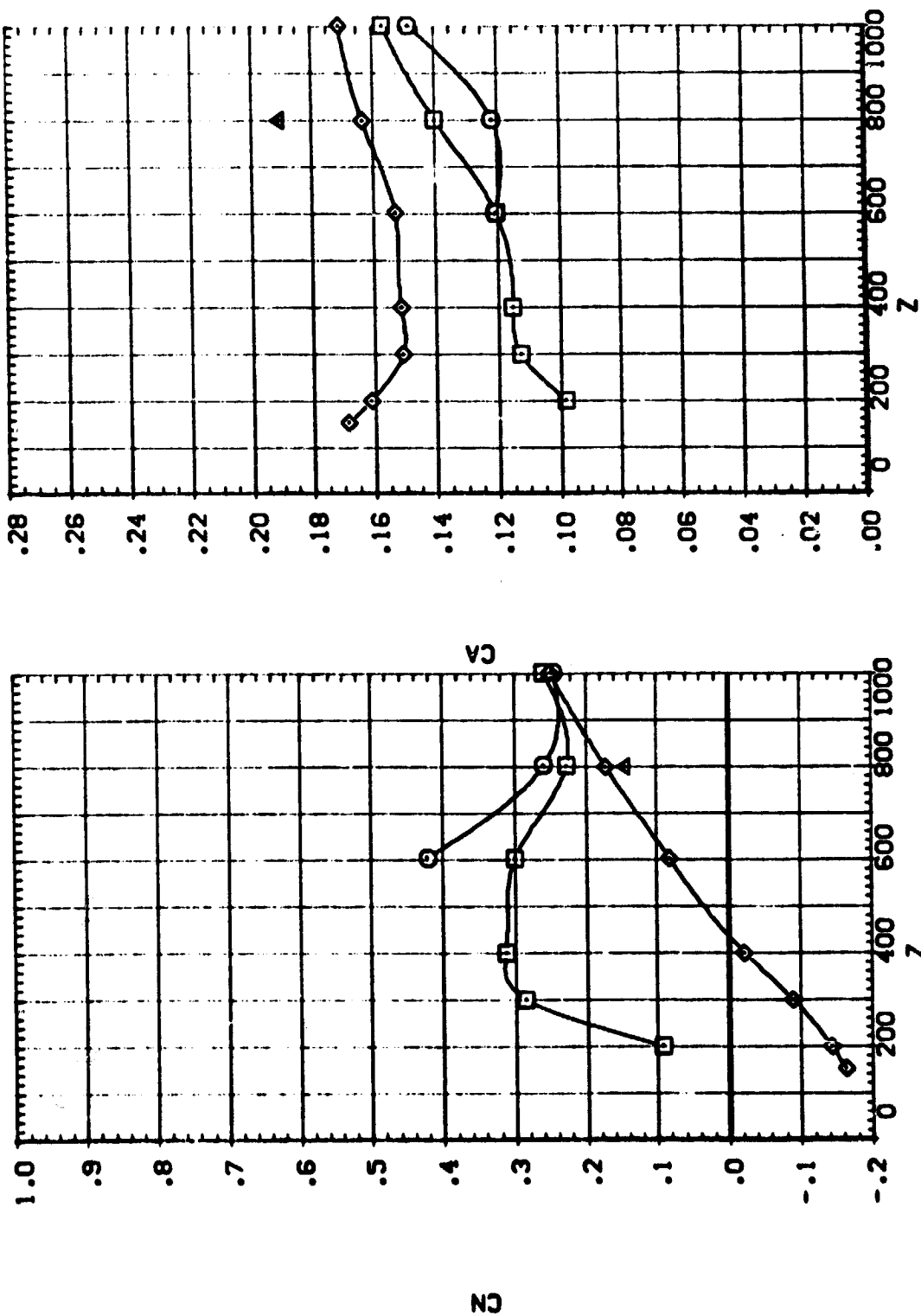
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTL | 28.900 |
|---------|---------|-------|----------|
| 199.780 | .342 | 4.510 | 5.000 |
| 399.680 | .000 | .000 | -5.000 |
| 800.940 | -10.000 | .000 | 1500.000 |
| | PC-#8 | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

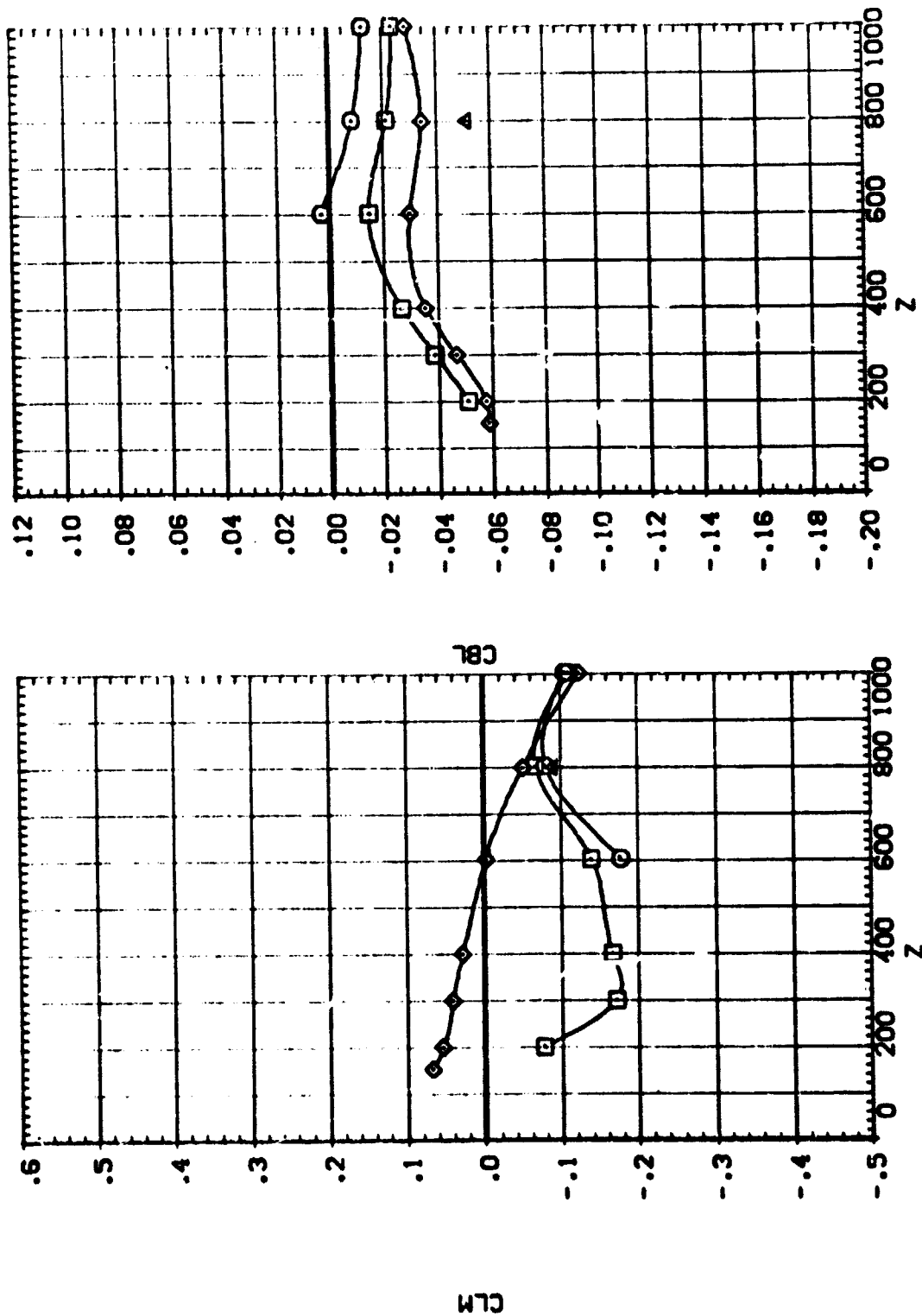


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

[A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RIJ249)]

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | 28.500 |
|--------|---------|--------|-------------------|--------|
| □ | 199.780 | ALPHA | 4.510 | PTOTL |
| △ | 399.680 | DALPHA | .000 | BETA |
| ○ | 600.940 | X | -10.000 | DBETA |
| | | | .000 | PC-HB |
| | | | 1500.000 | |

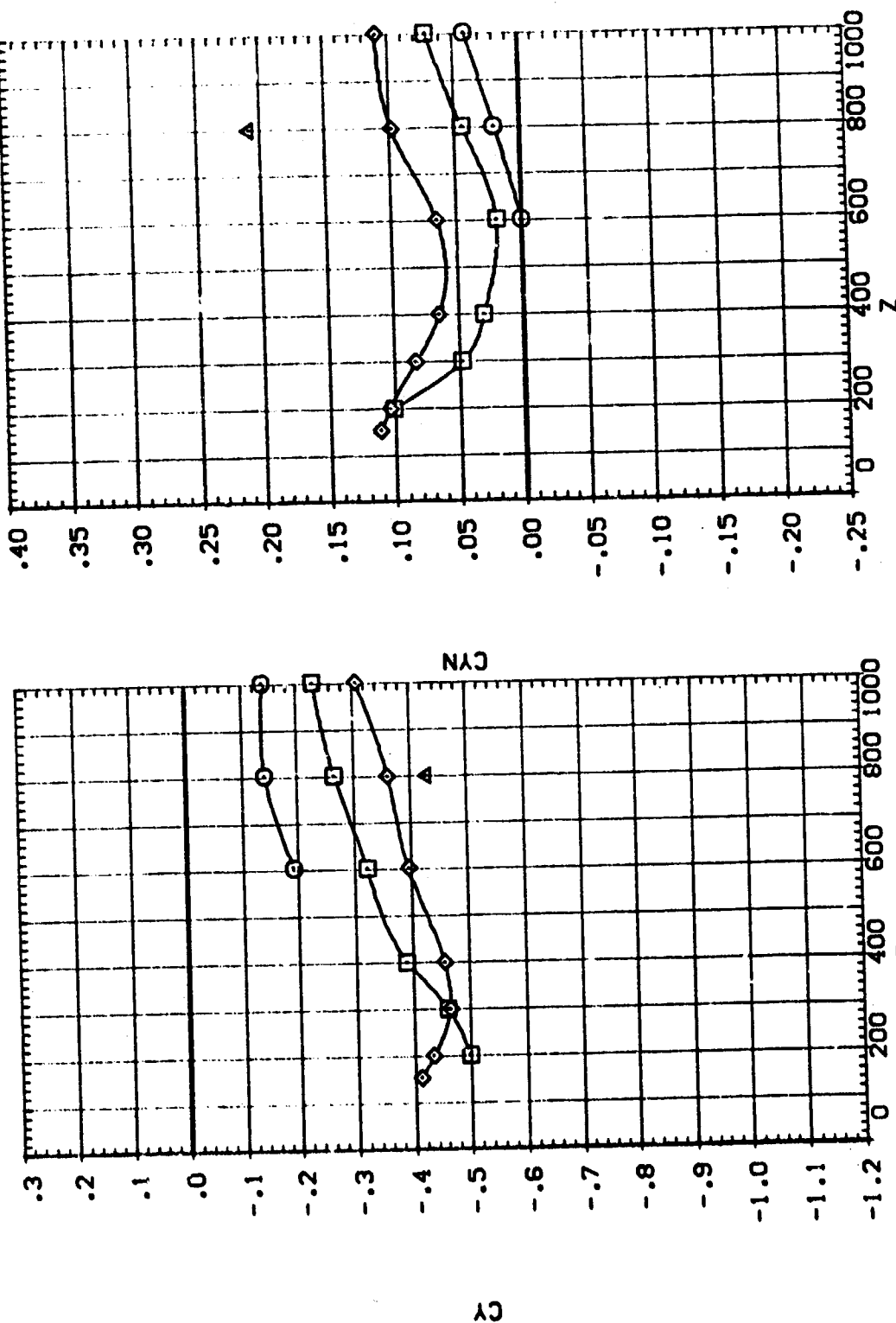


1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ249)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| Y | PARAMETRIC VALUES | | | |
|---------|-------------------|--------|----------|-------|
| | MACH | PTOTL | BETA | PC-HB |
| .342 | 4.510 | 28.900 | 5.000 | |
| 199.780 | .000 | BETA | -5.000 | |
| 399.680 | -10.000 | DBETA | 1500.000 | |
| 800.940 | .000 | PC-HB | | |

SYMBOL
 ○ □ ◇ △

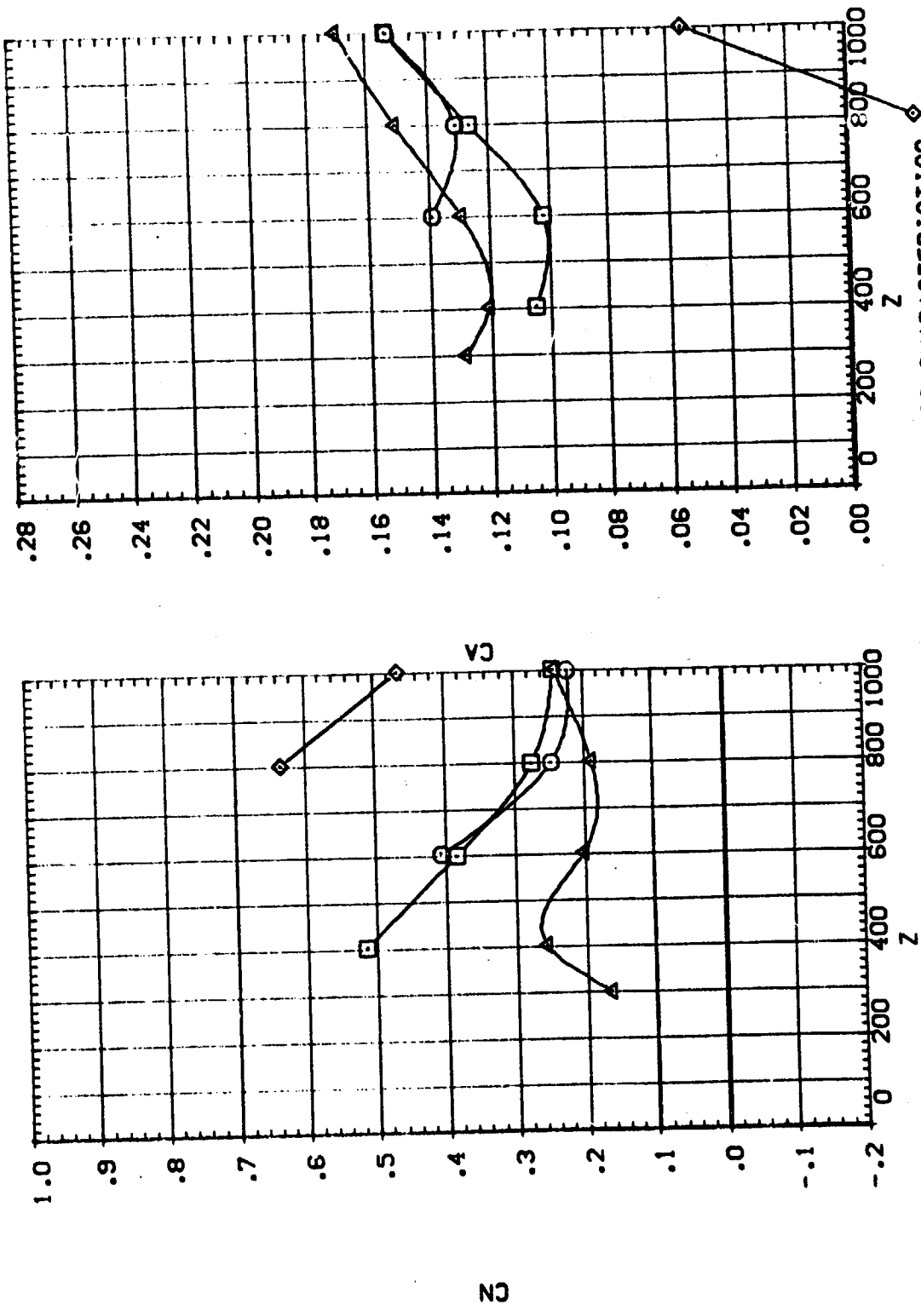


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ250)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

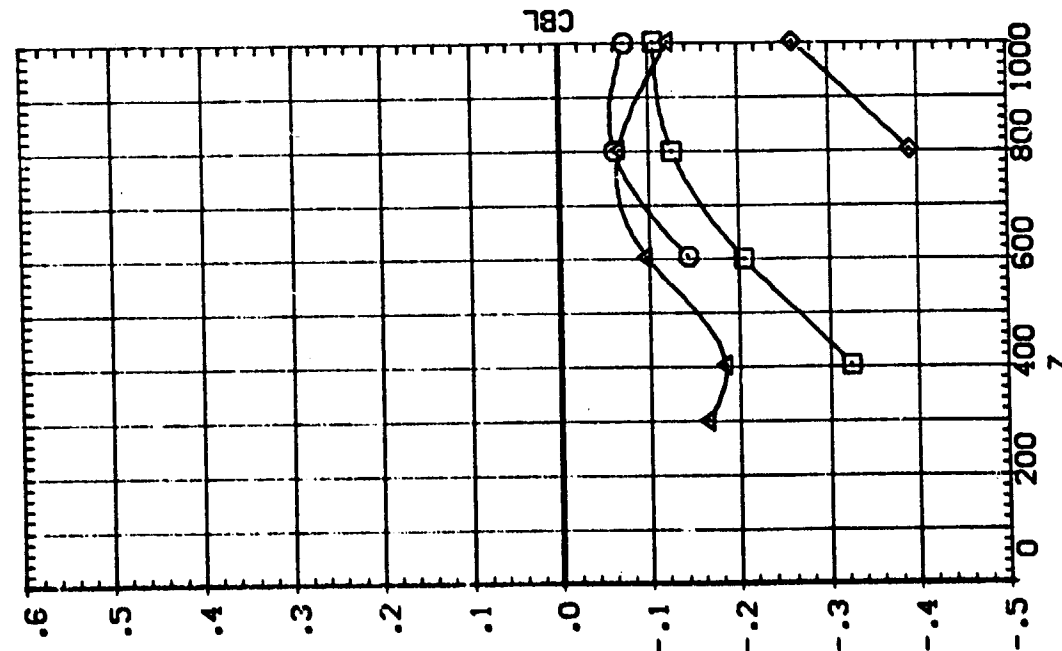
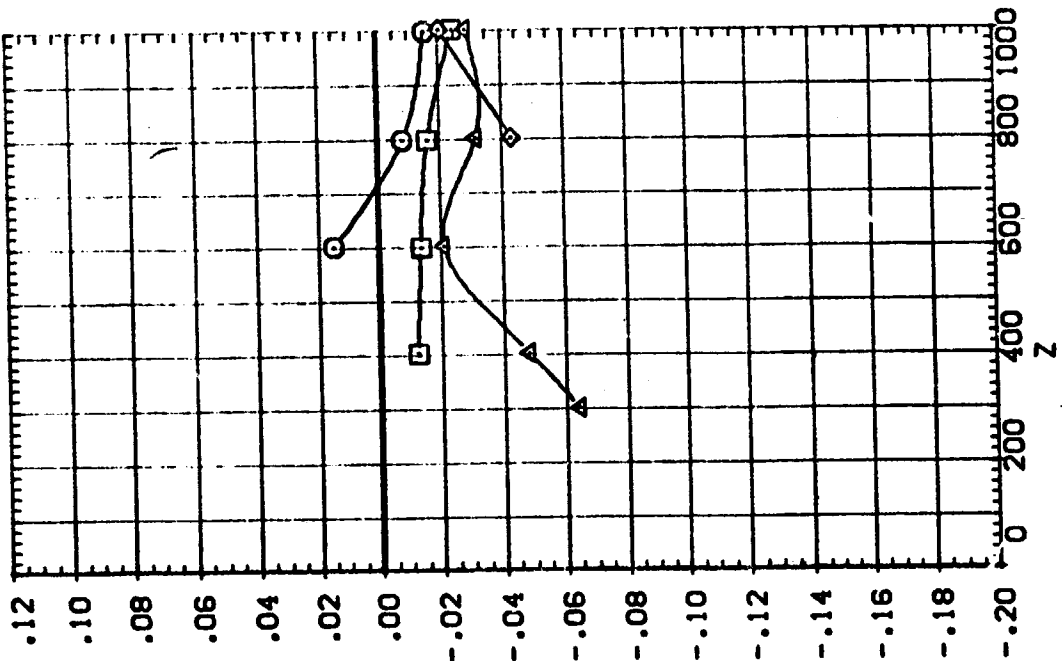
| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|------|----------|--|
| | | MACH | PIOTL | BETA | PC-HB | |
| ○ | .408 | 200.700 | 4.510 | .000 | 28.900 | |
| □ | 203.130 | 200.700 | 4.510 | .000 | 5.000 | |
| ◇ | 399.280 | 203.130 | 4.510 | .000 | -10.000 | |
| △ | | 399.280 | 4.510 | .000 | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ250)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL Y HAOH ALPHA BETA DBETA PC+HB
 200.700 .408 200.700 28.900
 203.130 .000 .000 5.000
 399.280 -10.000 -10.000 -10.000
 X 1500.000

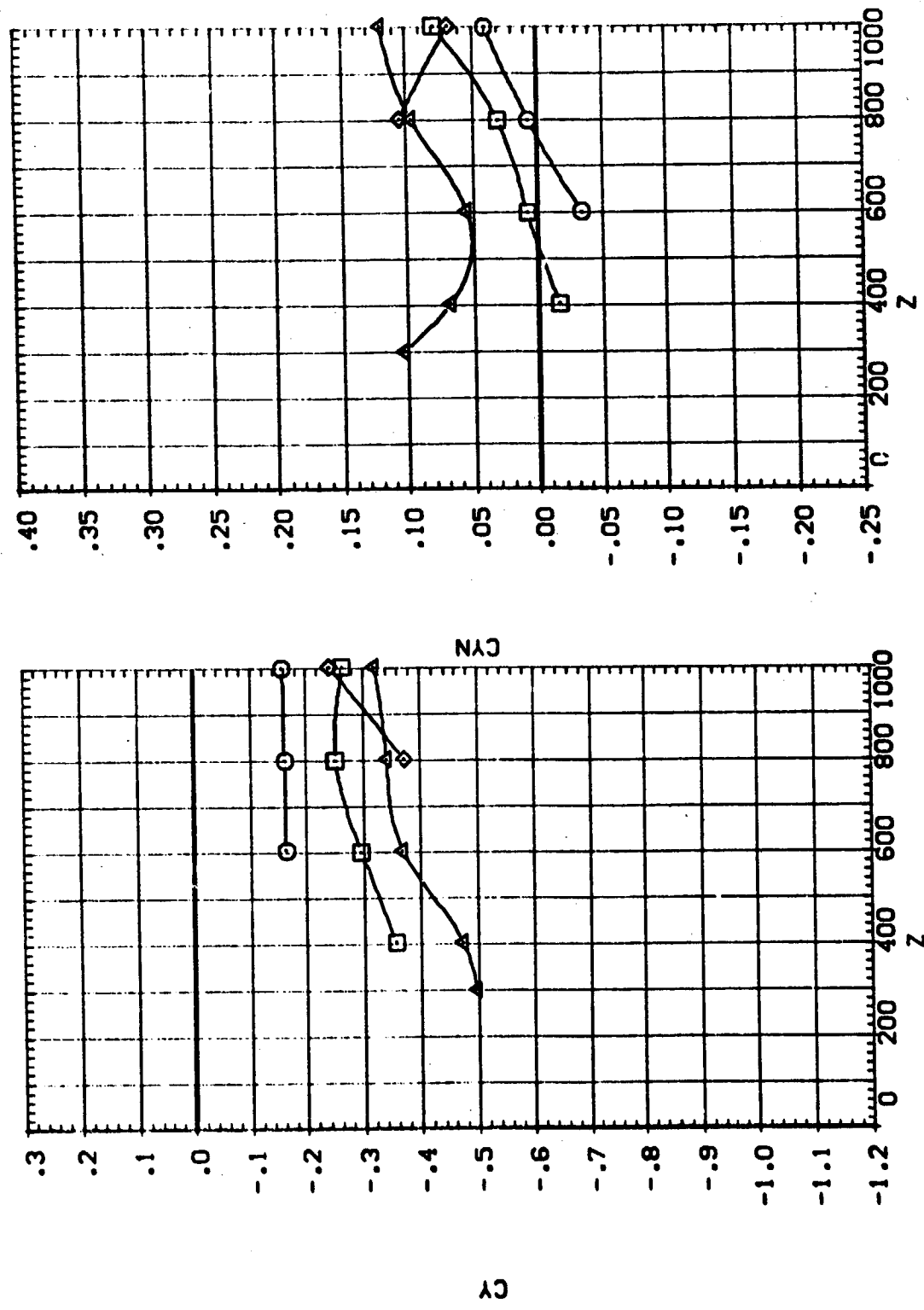


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ250)

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .408 | 4.510 | PTOTL 28.900 |
| □ | 200.700 | .000 | BETA 5.000 |
| ◇ | 203.130 | -10.000 | DBETA -10.000 |
| △ | 399.280 | .000 | PC+PB 1500.000 |

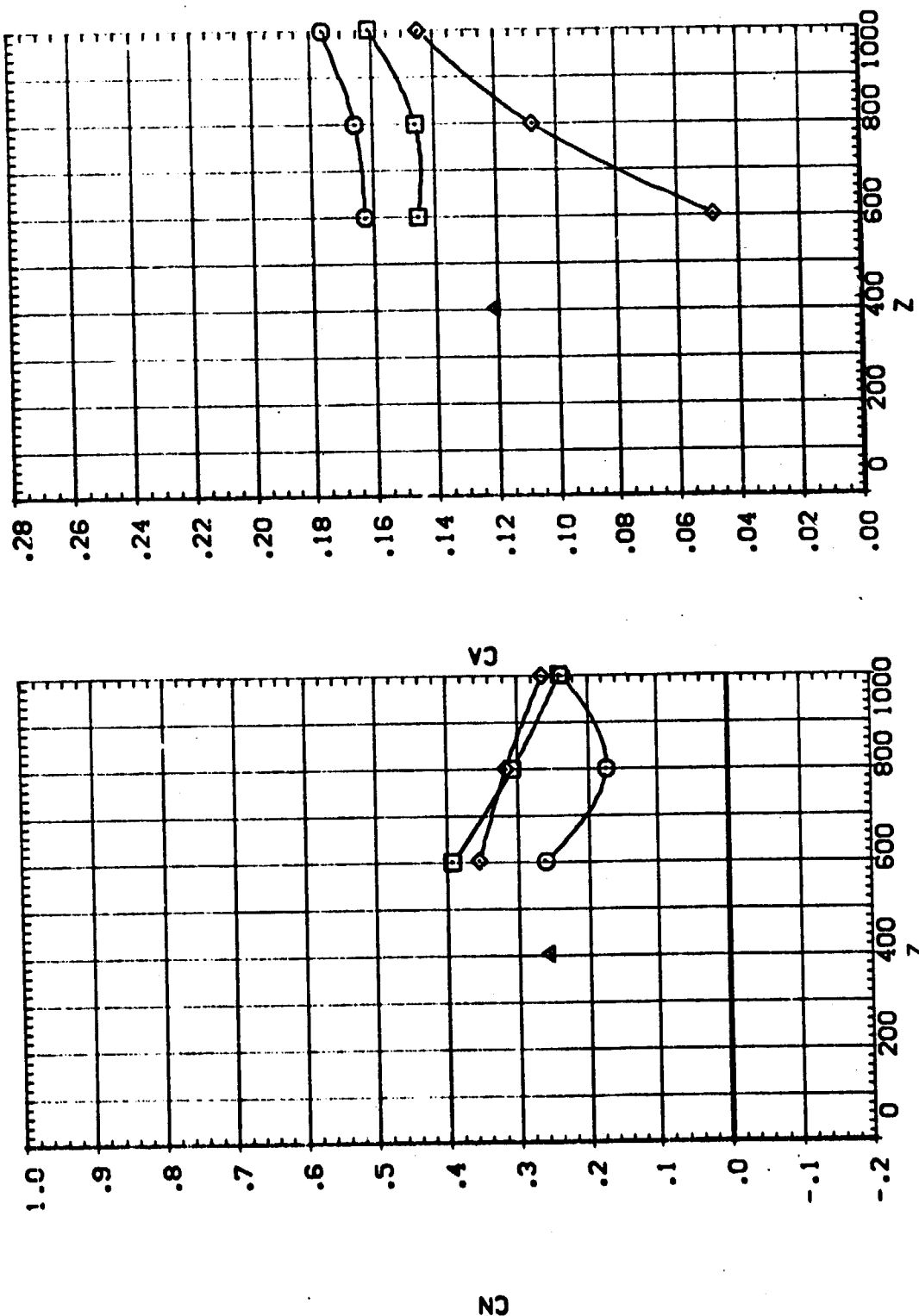
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ251)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTL | 28.900 |
|--------|---------|--------|-------------------|-------|----------|
| ○ | 200.590 | ALPHA | 4.510 | BETA | 5.000 |
| □ | 400.090 | DALPHA | .000 | DBETA | -20.000 |
| ◇ | 400.440 | X | .000 | PC+PB | 1500.000 |

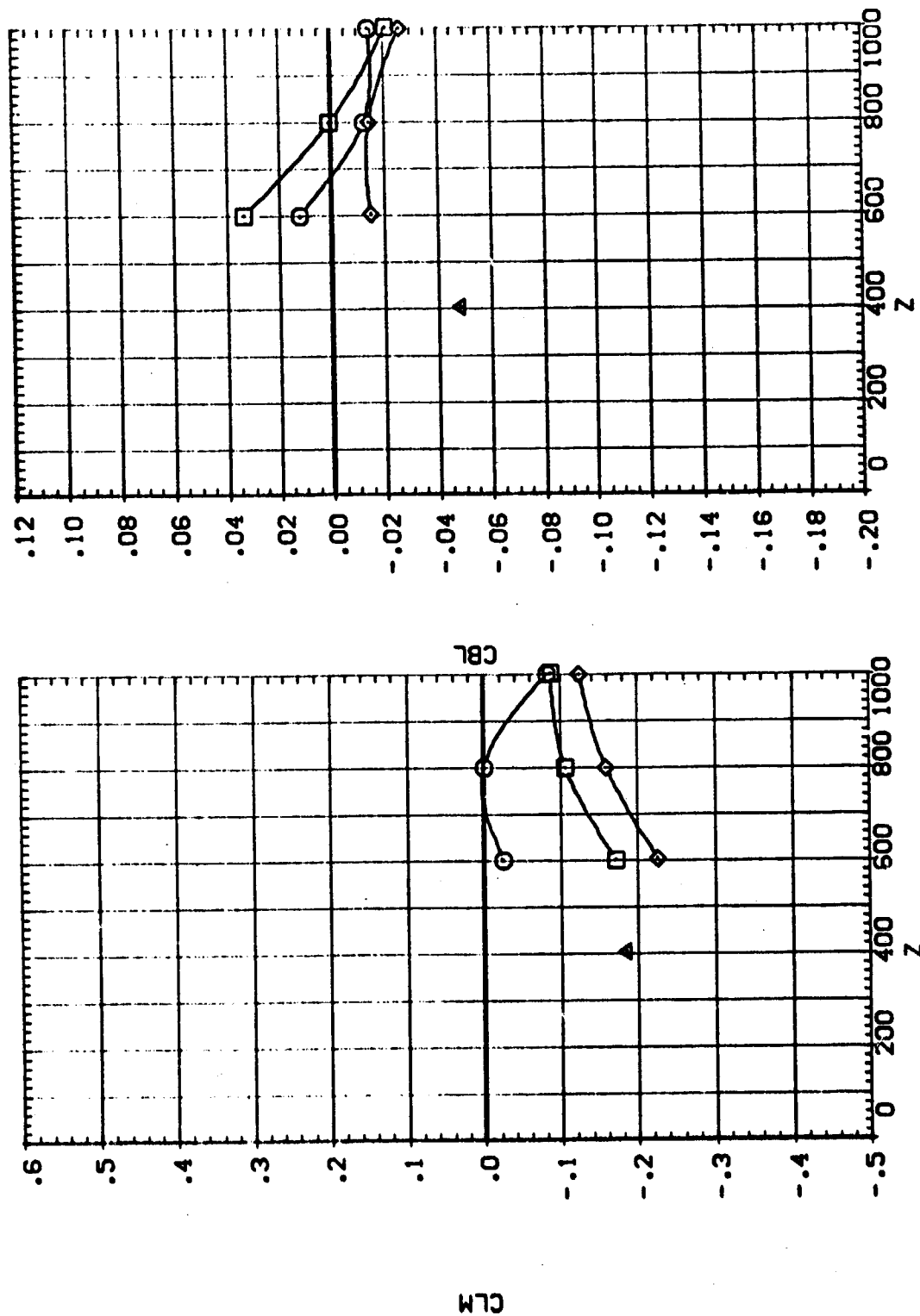


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ251)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|-------|
| | | | 4.510 | PTOTL | 28.900 | 5.000 |
| ○ | 200.590 | ALPHA | .000 | BETA | -10.000 | PC+PB |
| □ | 400.090 | DALPHA | .000 | DBETA | -20.000 | |
| ◇ | 400.440 | X | | | 1500.000 | |

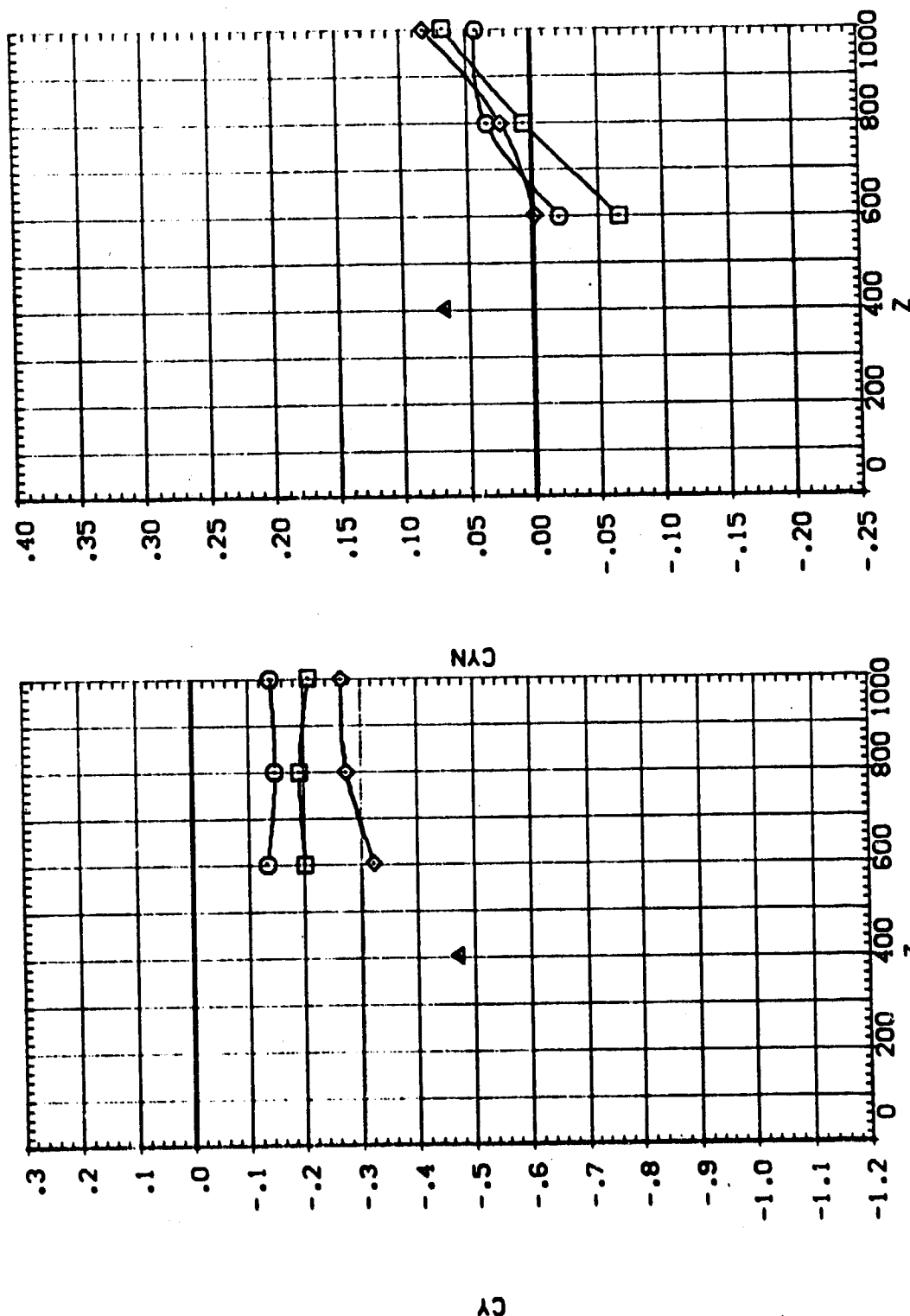


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ251)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | PTOTL |
| 0.632 | 28.500 |
| 200.590 | 5.000 |
| 400.050 | -20.000 |
| 400.440 | 1500.000 |
| MACH | BETA |
| 4.510 | -10.000 |
| ALPHA | PO+PB |
| 0.000 | 0.000 |
| DALPHA | |
| X | |

SYMBOL
 ○ □ ◇ △



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

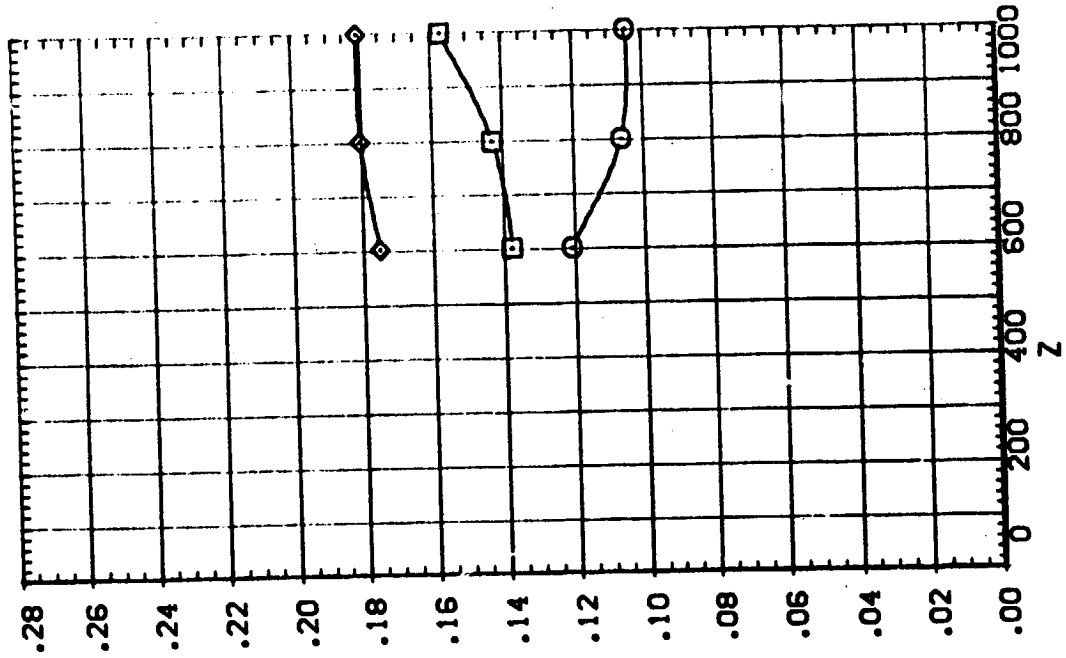
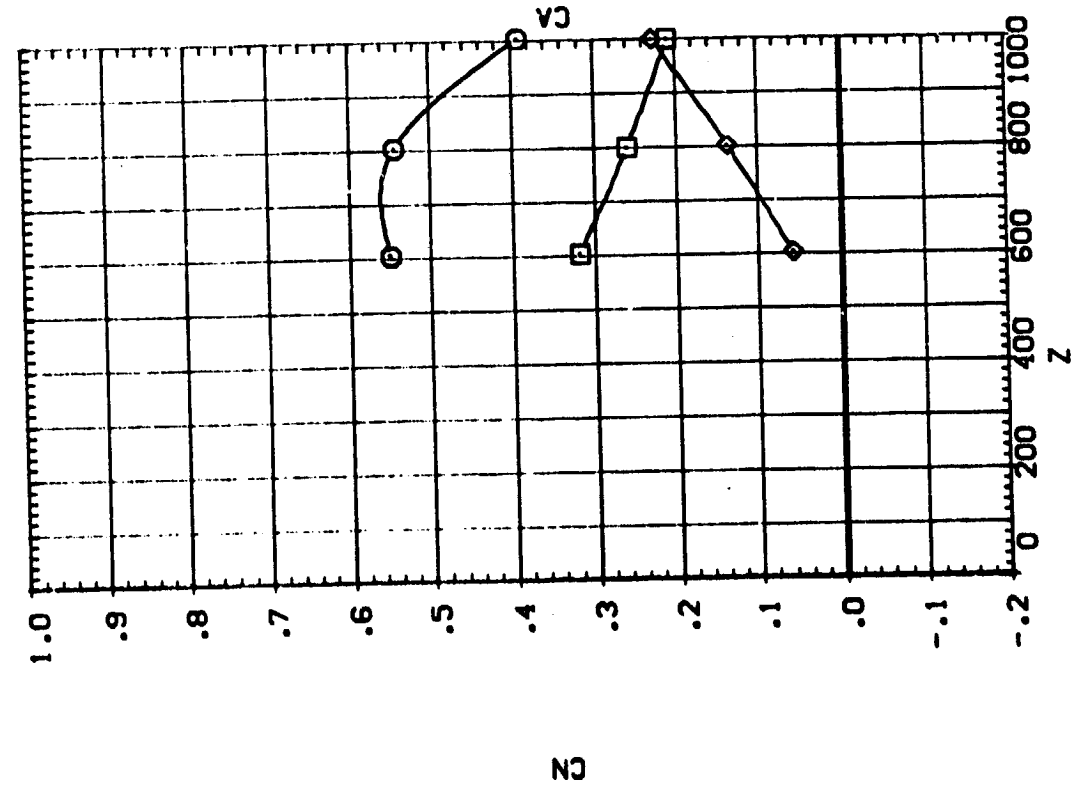
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ252)

SYMBOL

○ □ ◇

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 2.053 |
| MACH | 4.510 |
| PTOTL | 28.900 |
| ALPHA | .000 |
| BETA | 5.000 |
| DALPHA | -20.000 |
| DBETA | 5.000 |
| PC-MB | 1500.000 |
| X | .000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



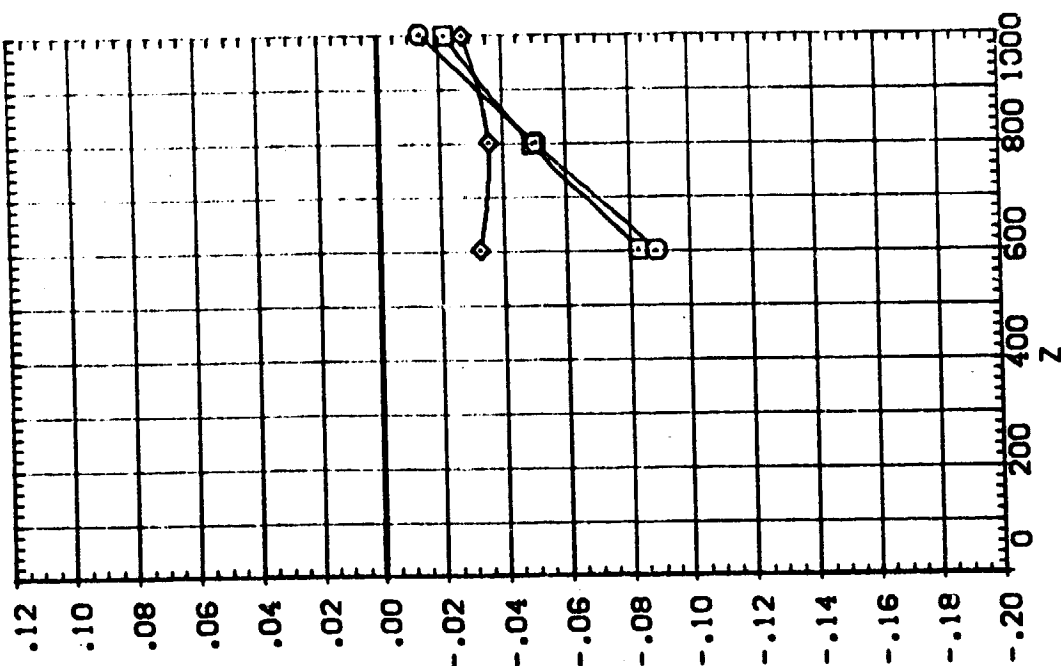
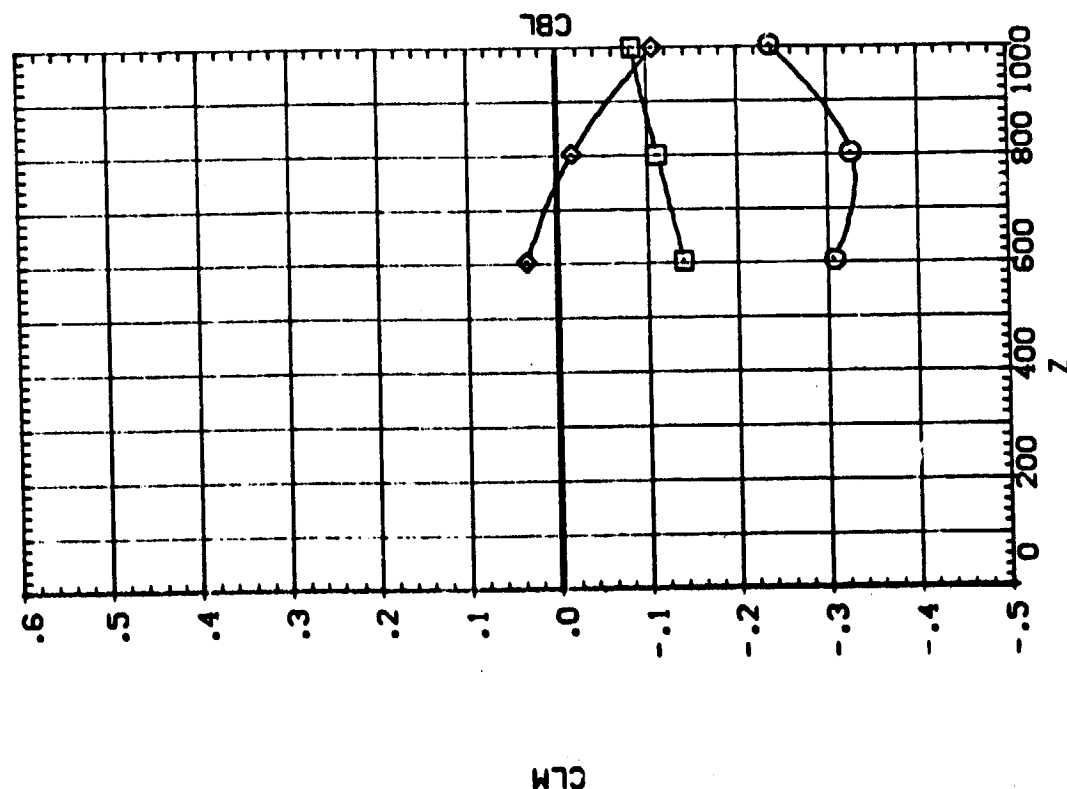
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ252)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 2.053 |
| MACH | 4.510 |
| PTOTL | 28.900 |
| ALPHA | .000 |
| BETA | 5.000 |
| DBETA | 5.000 |
| DALPHA | -20.000 |
| PCF#8 | .000 |
| X | 1500.000 |

SYMBOL

○ □ ◇

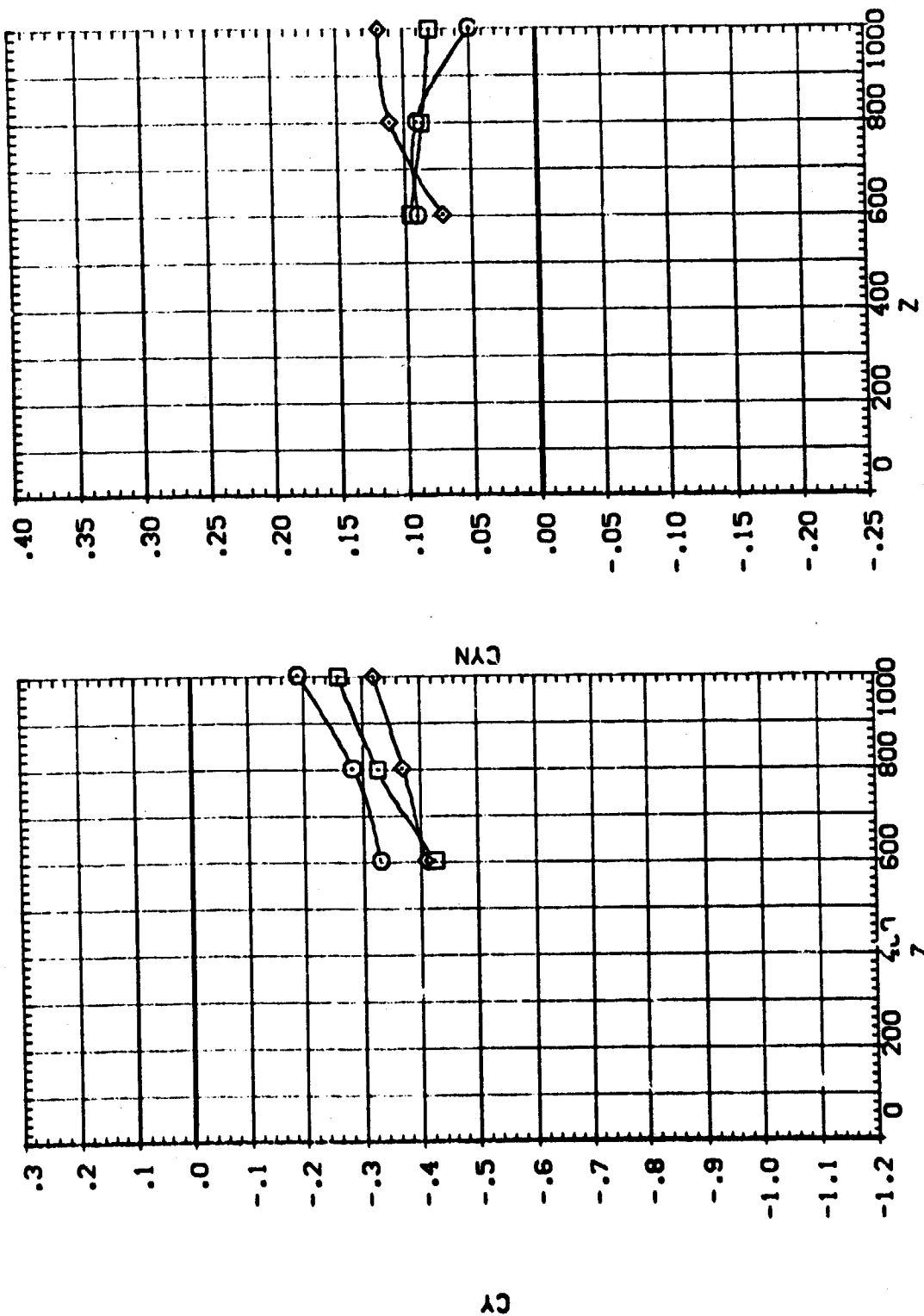


EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ252)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

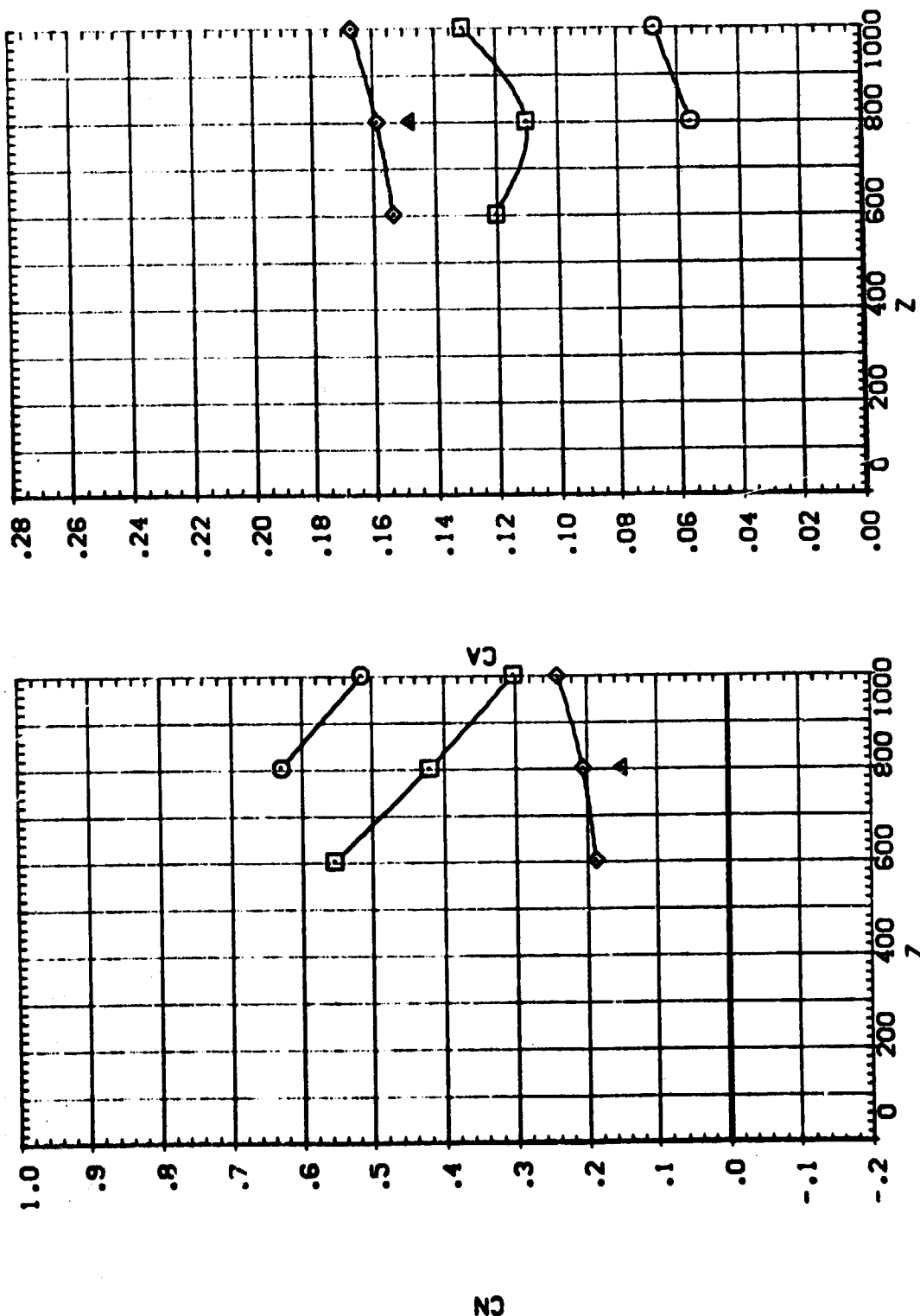
| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|------|-------|----------|
| | | MACH | PTOTL | BETA | DBETA | PC+PB |
| ○ | 2.053 | ALPHA | .000 | | | 28.900 |
| □ | 200.440 | DALPHA | -20.000 | | | 5.000 |
| ◇ | 400.210 | X | .000 | | | 5.000 |
| | | | | | | 1500.000 |



IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ253)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| Y | 1.743 | MOCH | 4.510 | PTOTL | 28.500 | |
| | 159.830 | ALPHA | .000 | BETA | 5.000 | |
| | 392.770 | DALPHA | -20.000 | DBETA | .000 | |
| | 800.520 | X | .000 | PCMB | 1500.000 | |



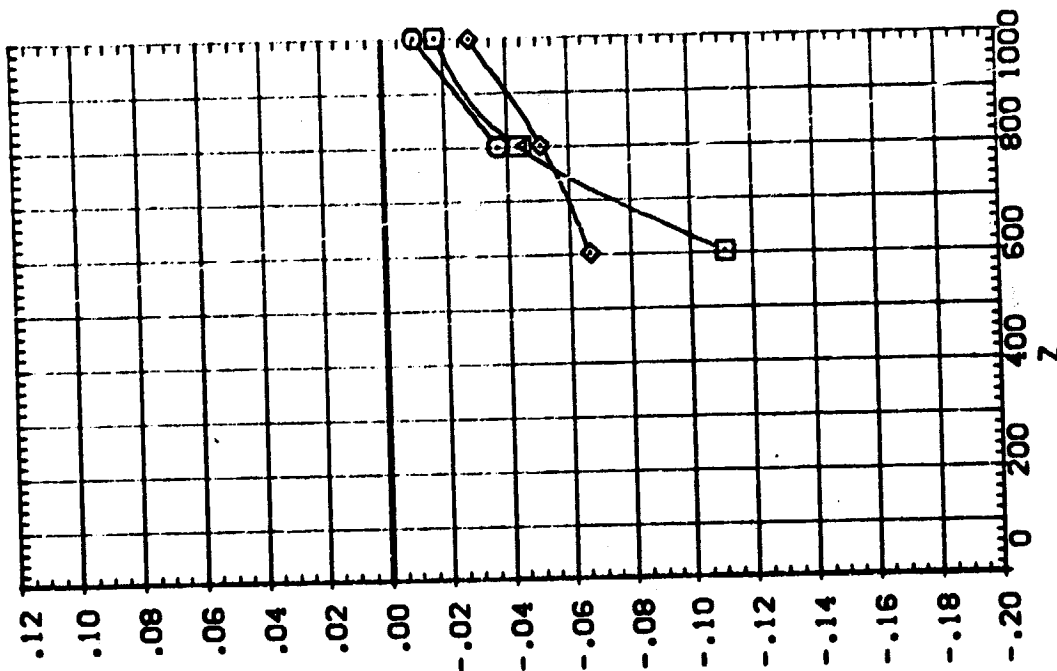
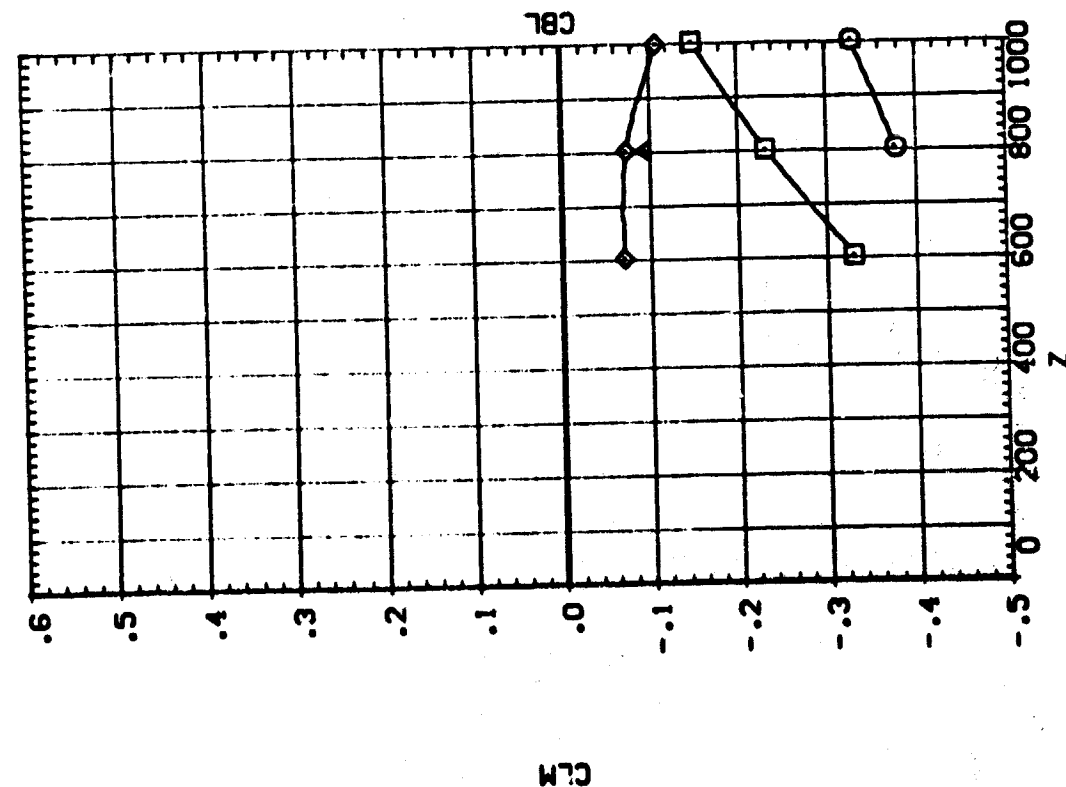
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ253)

SYMBOL
 ○ □ ◇ △

| PARAMETRIC VALUES | | | |
|-------------------|---------|-------|----------|
| Y | MACH | PTOTL | 28.900 |
| 1.743 | 4.510 | BETA | 5.000 |
| 198.830 | .000 | DBETA | .000 |
| 399.770 | -20.000 | PC+PB | 1500.000 |
| 800.520 | .000 | | |

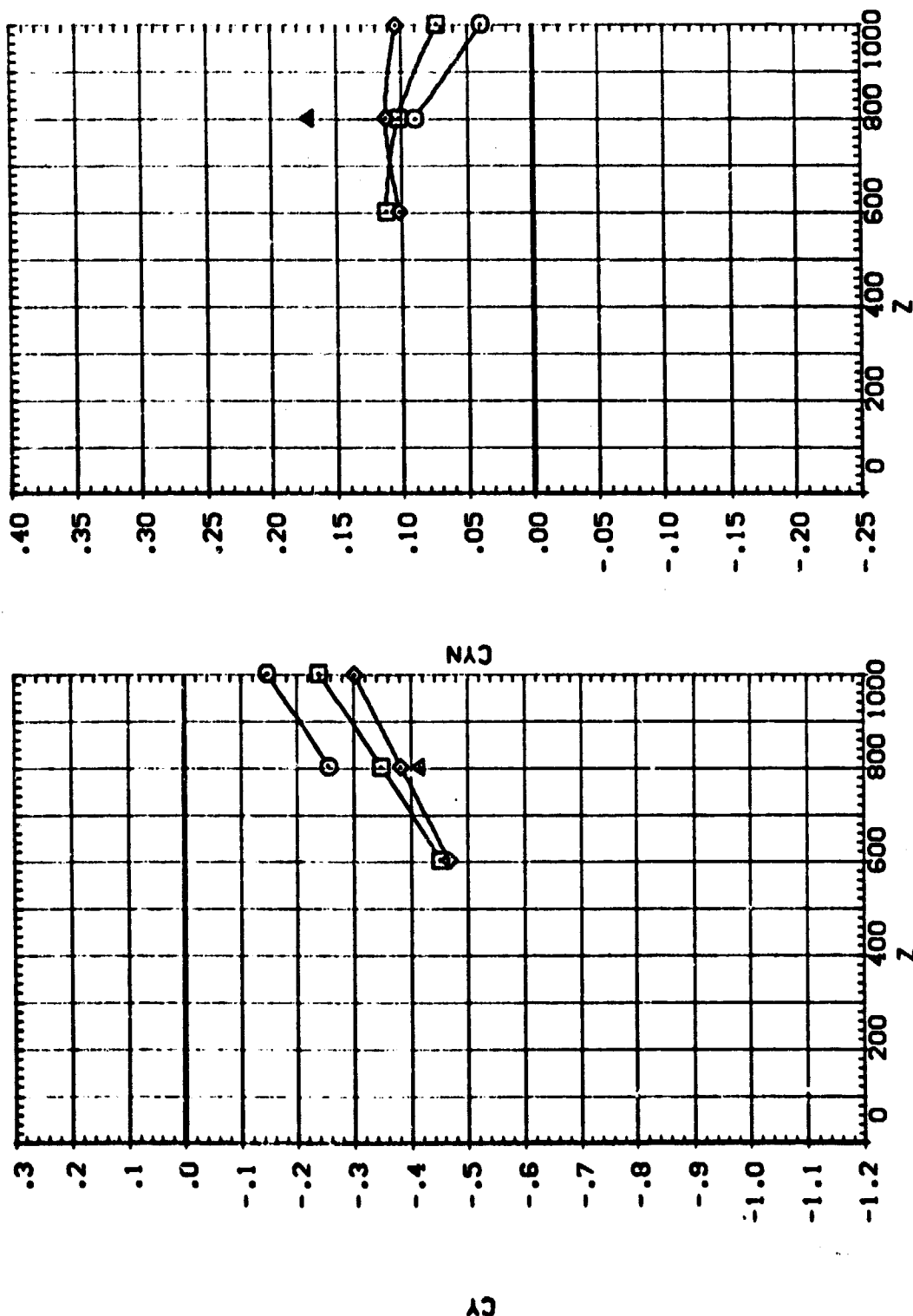
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RTJ253)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES |
|--------|---------|-------------------|
| ○ | 1.743 | MACH |
| □ | 129.830 | ALPHA |
| ◇ | 389.770 | DALPHA |
| △ | 800.520 | X |
| | | 28.900 |
| | | 5.000 |
| | | .000 |
| | | 1500.000 |

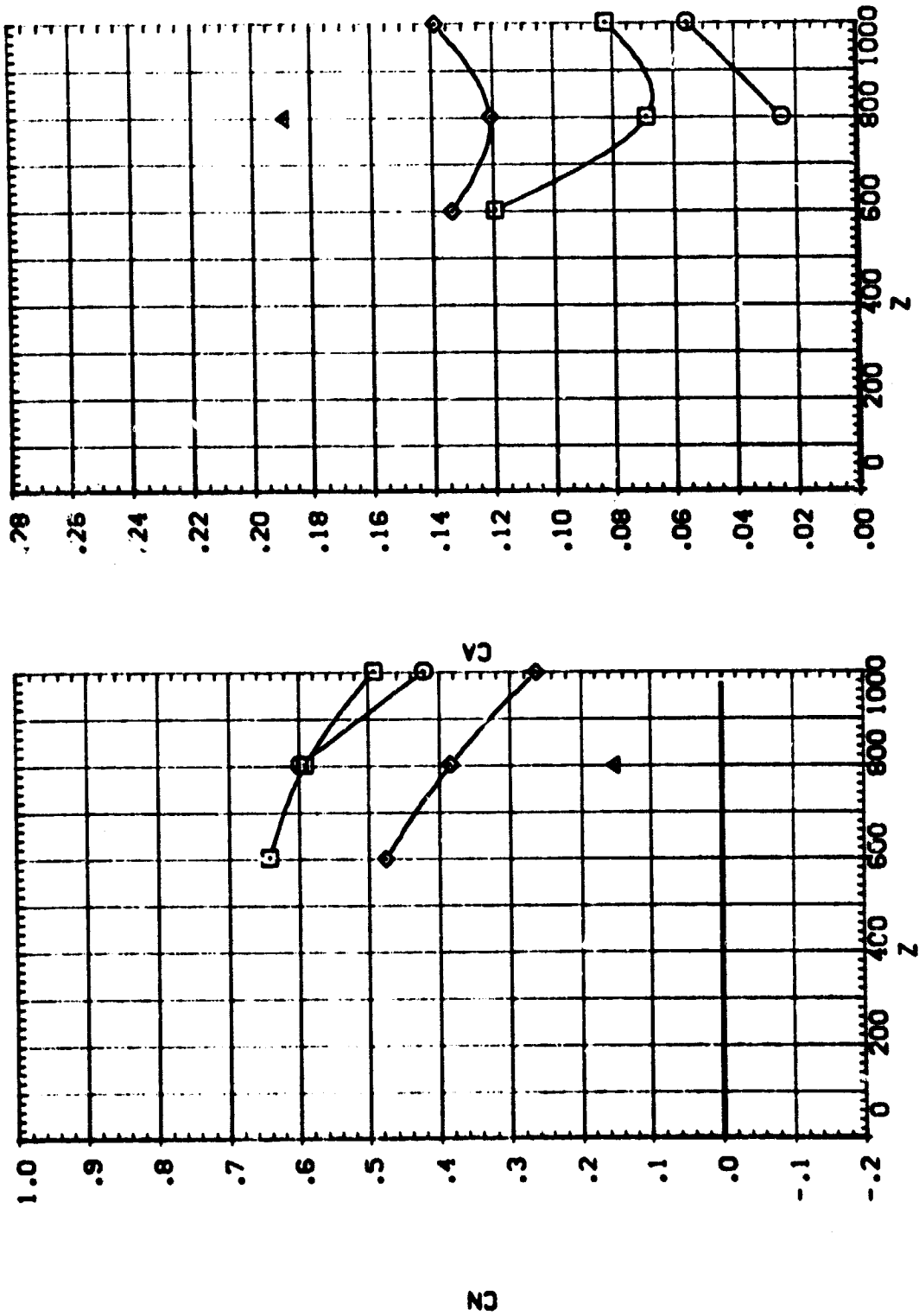


EFFECT OF SRB W/PLUMES SEPARATION ON 098/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ254)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

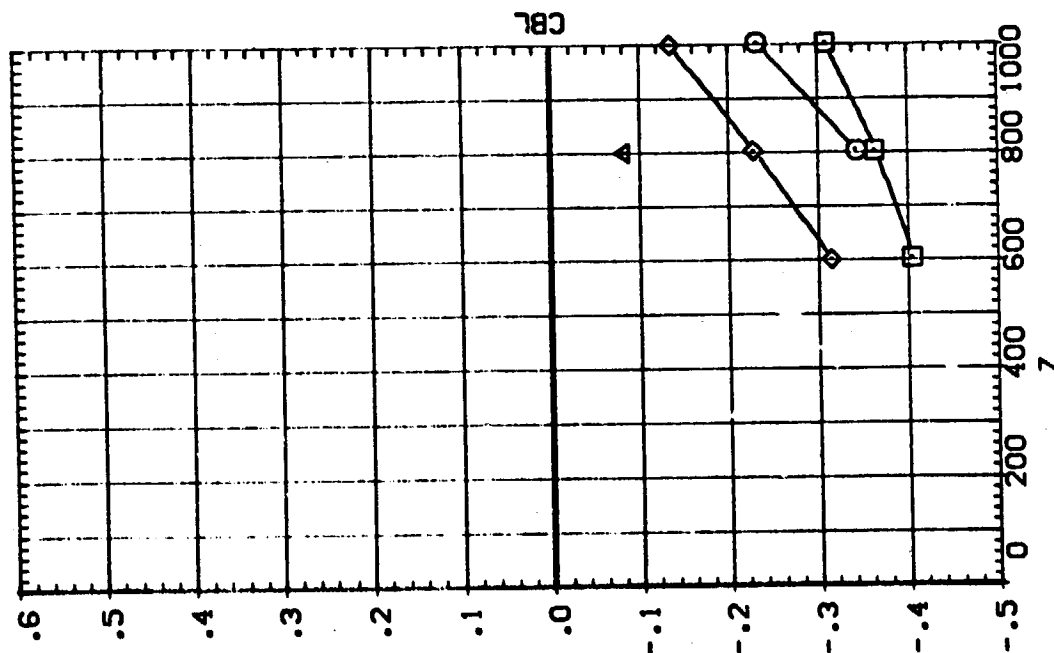
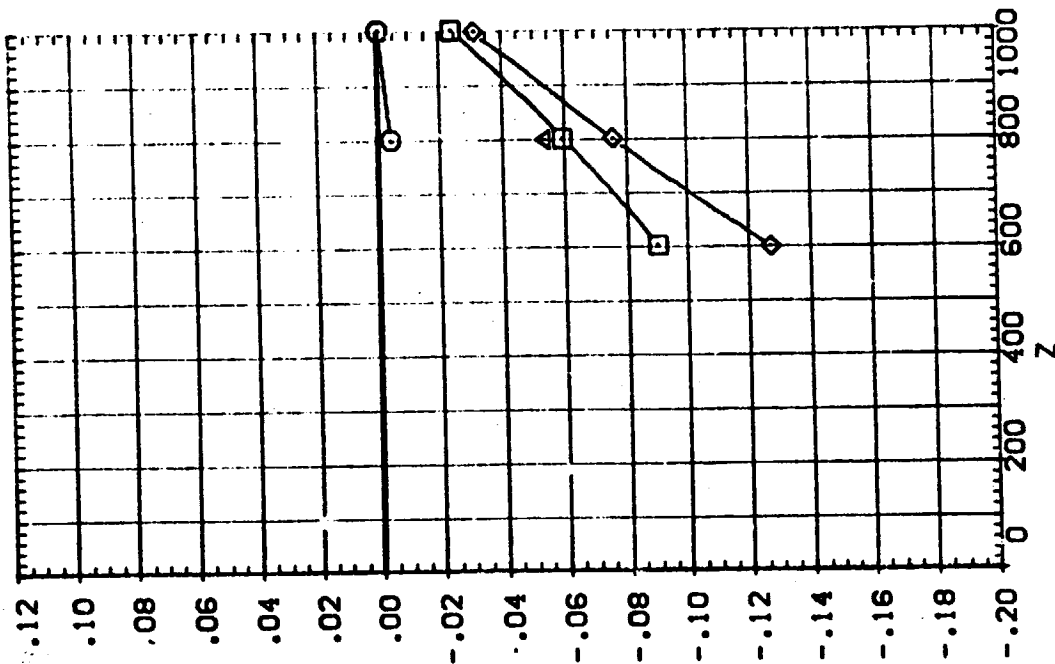
| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| □ | 1.745 | 4.510 | PTOTL 28.900 |
| ◇ | 200.010 | .000 | BETA 5.000 |
| △ | 400.380 | -20.000 | DBETA -5.000 |
| | 800.410 | .000 | PC+P8 1500.000 |



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ254)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|---------|----------|-------|
| | | MACH | PTOTL | BETA | DBETA | PC/H8 |
| □ | 1.745 | 4.510 | 28.500 | .000 | 5.000 | |
| ◇ | 200.010 | .000 | 5.000 | -20.000 | -5.000 | |
| △ | 400.380 | .000 | 5.000 | .000 | 1500.000 | |
| | 600.410 | X | | | | |

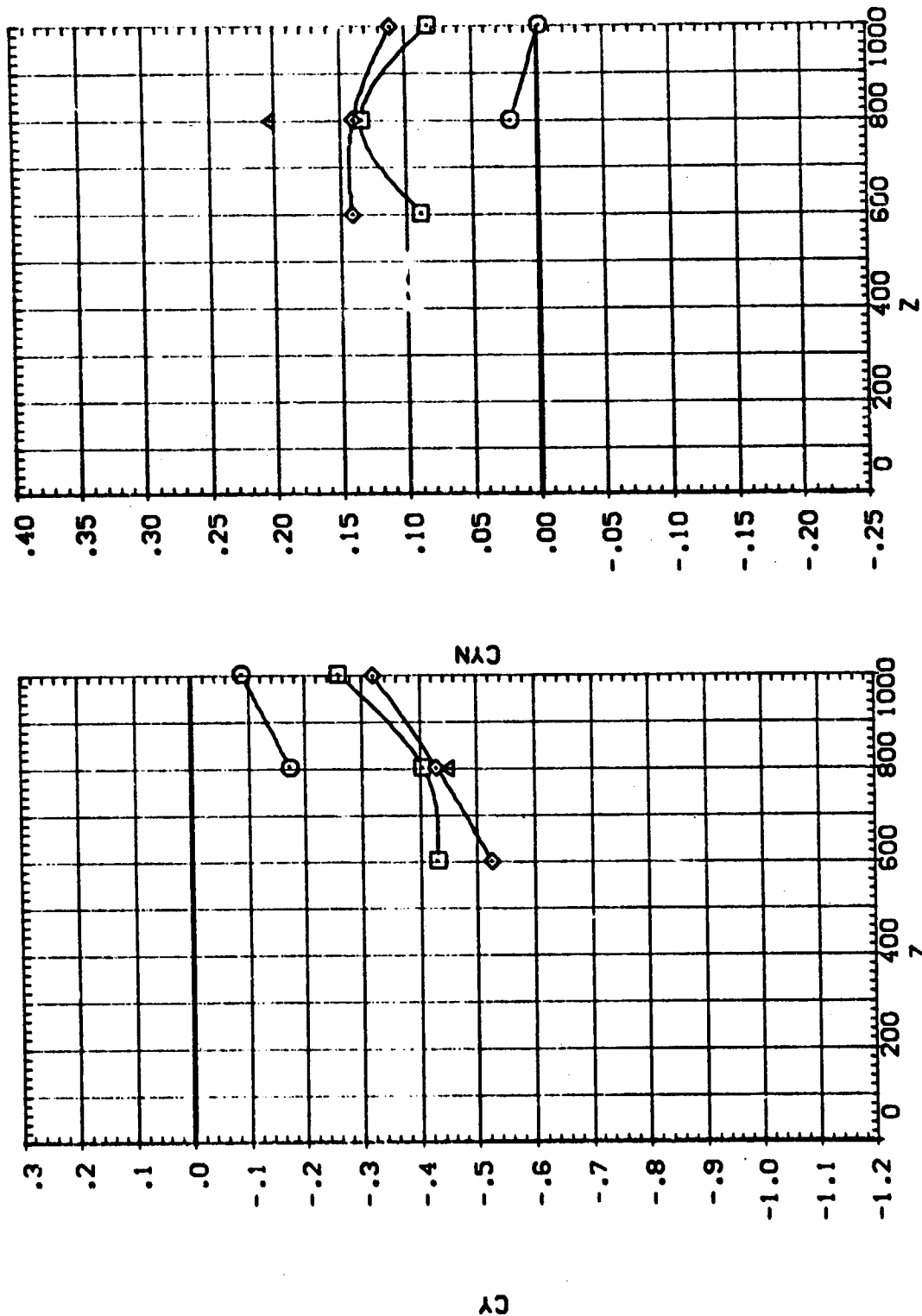


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ254)

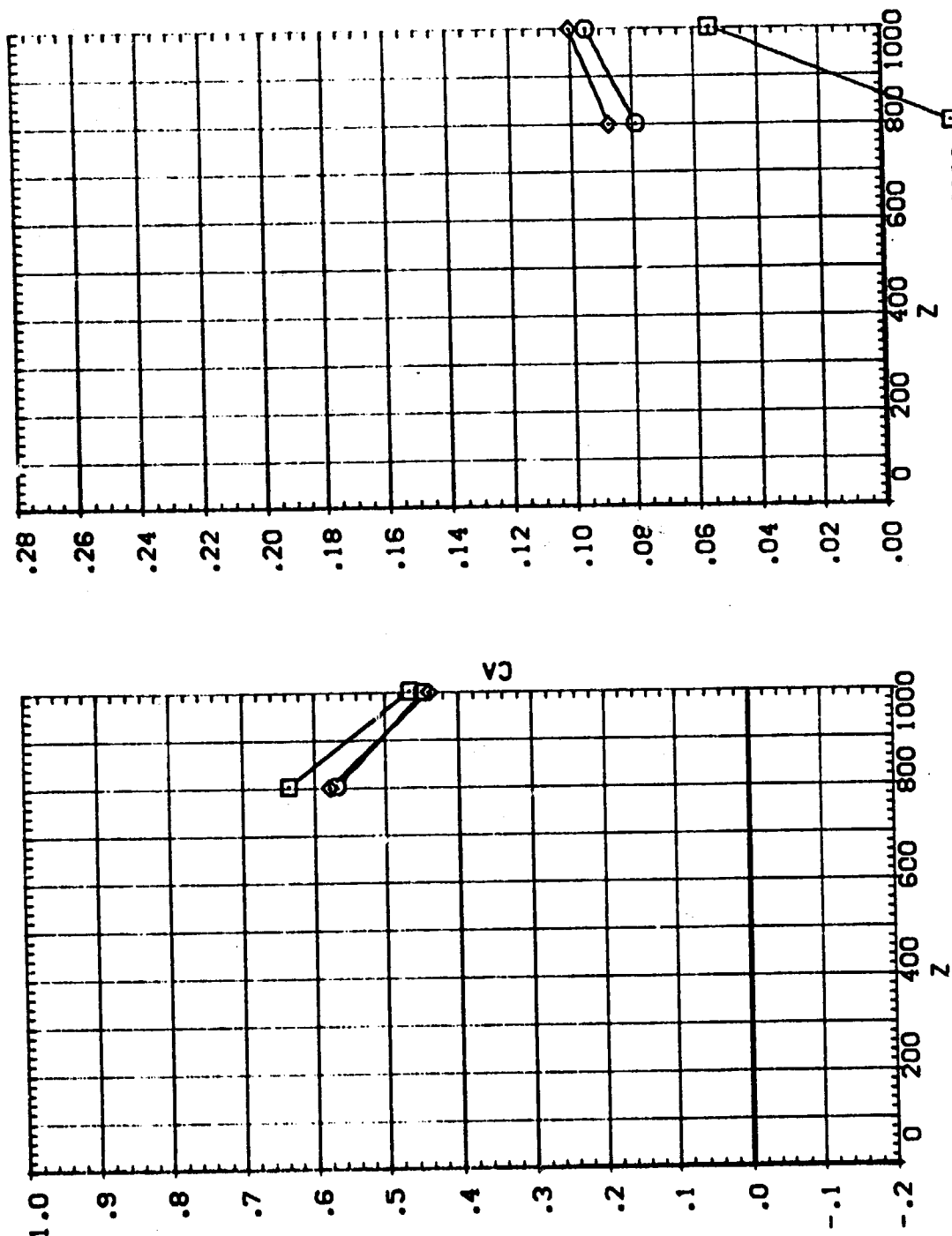
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--------|
| | | 1.745 | MACH | 4.510 | PTOTL | 28.900 |
| ○ | 200.010 | ALPHA | .000 | BETA | 5.000 | |
| □ | 400.380 | DALPHA | -20.000 | DBETA | -5.000 | |
| ◇ | 800.410 | X | .000 | PC48 | 1500.000 | |



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

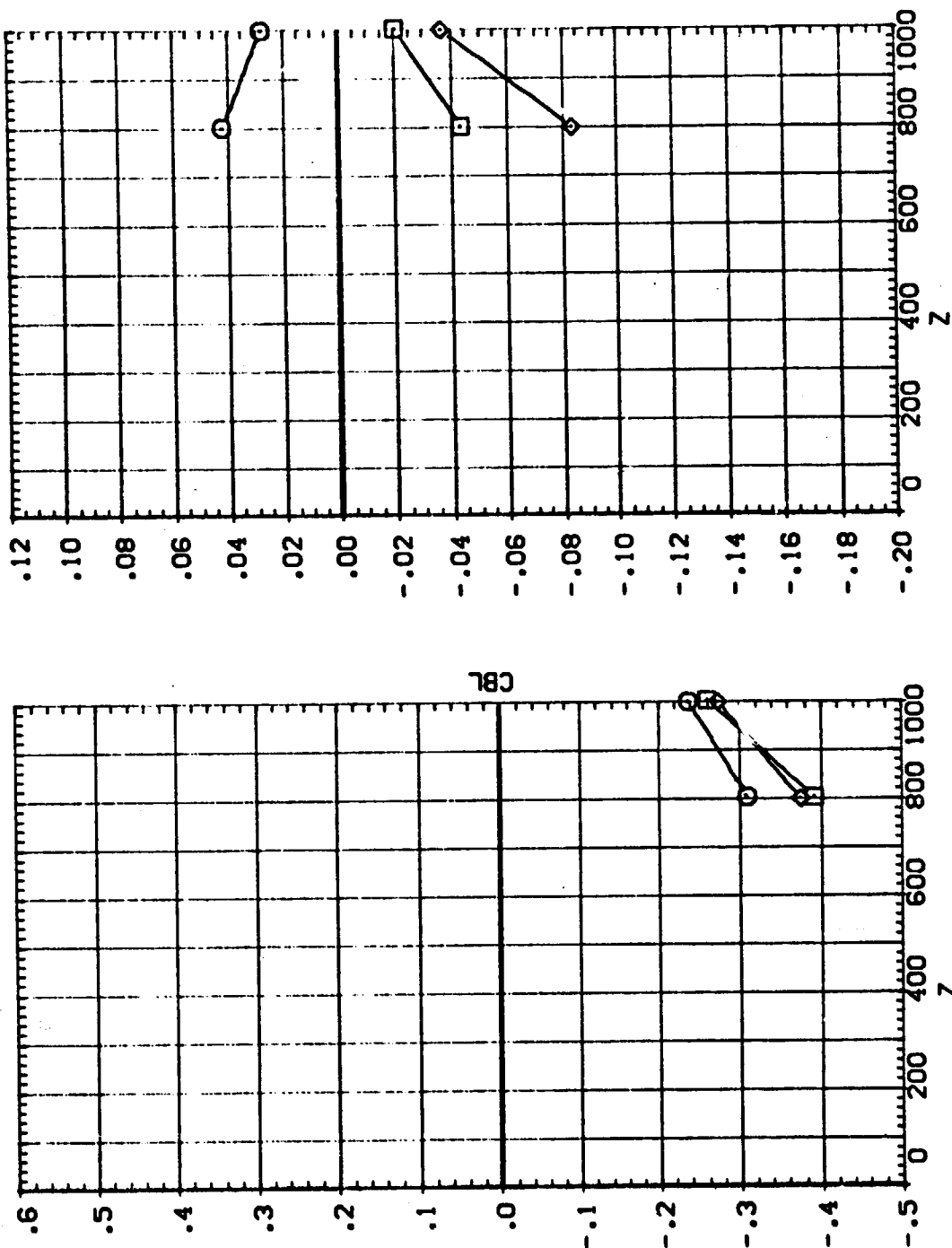
SYMBOL Y .448 MACH 4.510 PTOTL 28.500
 203.130 ALPHA .000 BETA 5.000
 401.510 DIALPHA -20.000 DBETA -10.000
 800.120 X .000 PC-#B 1500.000



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ255)

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 203.130 | ALPHA | .000 | BETA | 5.000 | |
| □ | 401.510 | DALPHA | -20.000 | DBETA | -10.000 | |
| ◇ | 800.120 | X | .000 | POH8 | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ255)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

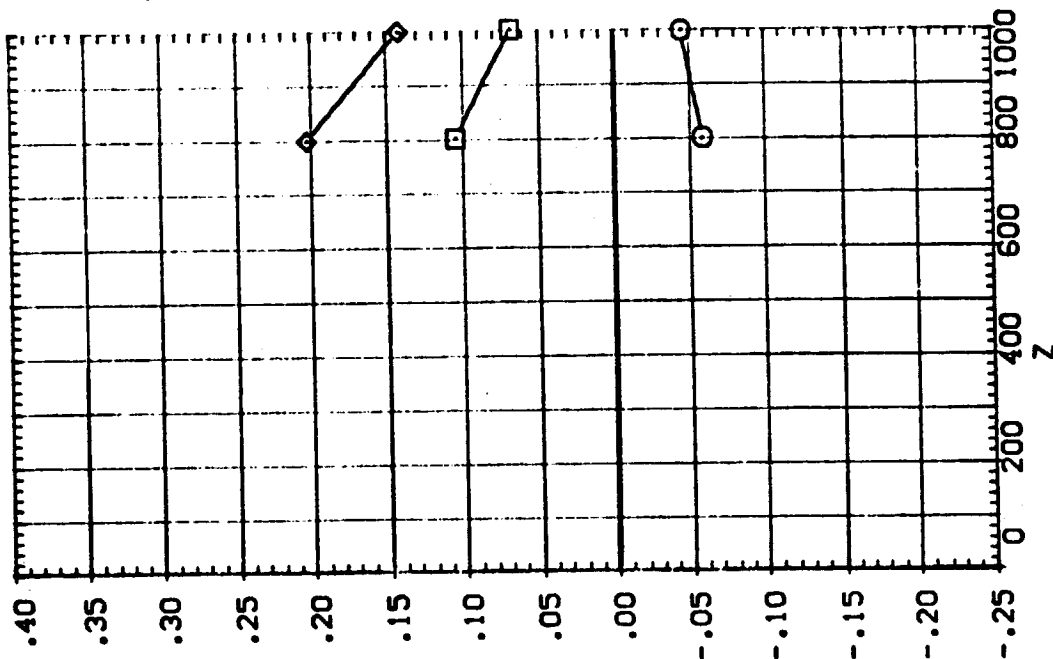
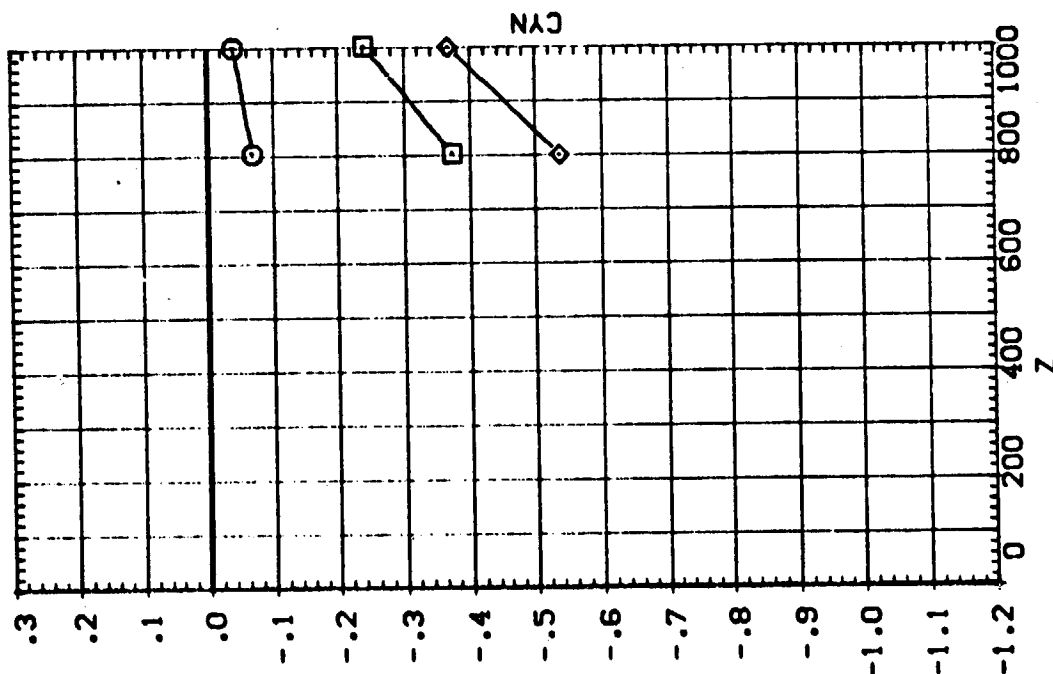
| PARAMETRIC VALUES | |
|-------------------|----------|
| MACH | 28.500 |
| PTOTL | 5.000 |
| BETA | -10.000 |
| DBETA | 1500.000 |
| PC*PB | |

Y
203.130
401.510
800.120

4.510
.000
-20.000
.000

4.510
.000
-20.000
.000

28.500
5.000
-10.000
1500.000

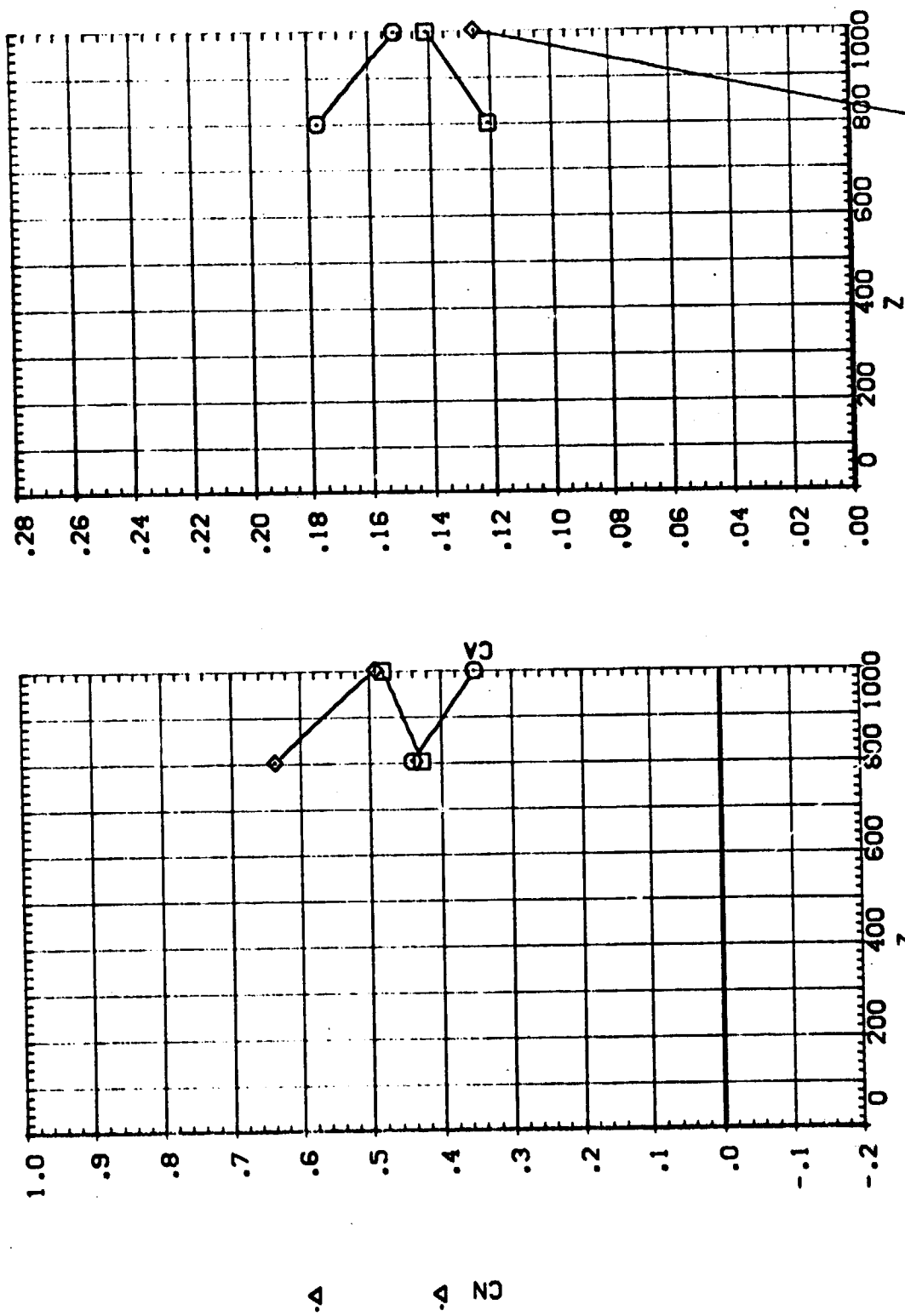


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ256)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

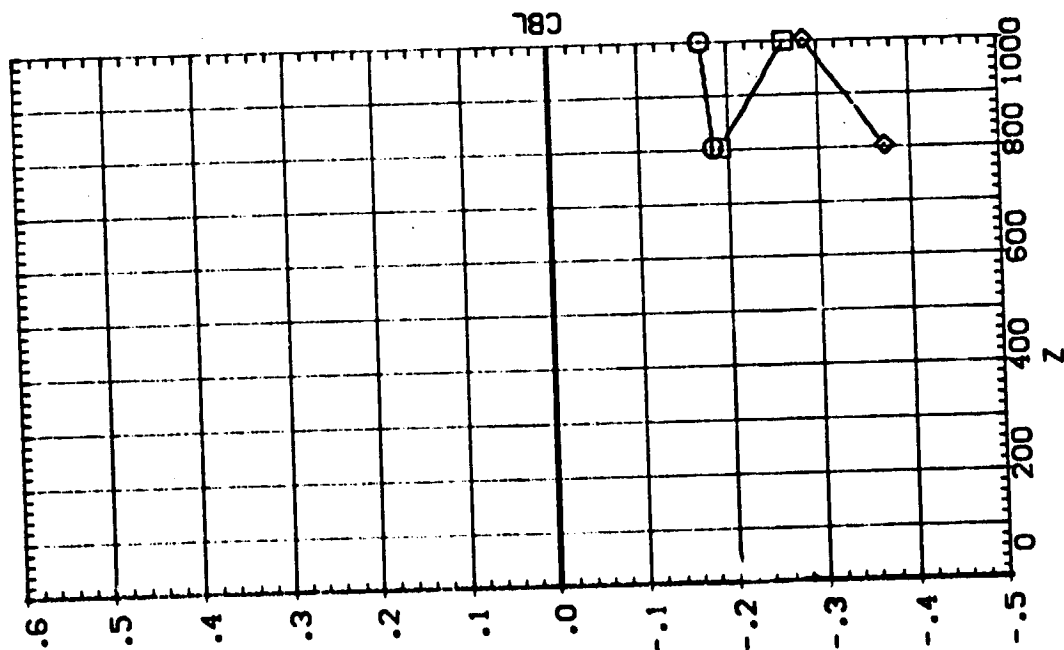
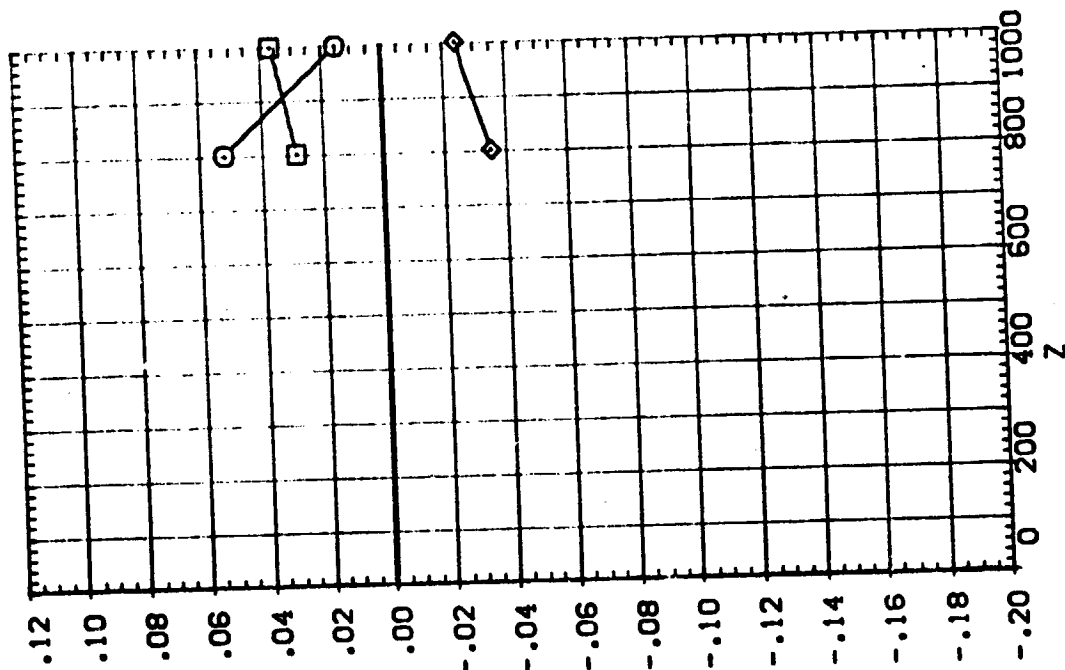
| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|-------|----------|
| | | MACH | 4.510 | POTTL | 28.900 |
| □ | 200.500 | ALPHA | .000 | BETA | 5.000 |
| ◇ | 403.800 | ALPHA | -20.1000 | DBETA | -20.000 |
| △ | 800.420 | X | .000 | PO-#8 | 1500.000 |



1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ256)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| | | MACH | 4.510 | POTL | 28.900 | |
| ○ | 1.442 | ALPHA | .000 | BETA | 5.000 | |
| □ | 200.500 | DALPHA | -20.000 | DBETA | -20.000 | |
| ◇ | 403.800 | X | .000 | PC-HB | 1500.000 | |
| | 800.420 | | | | | |



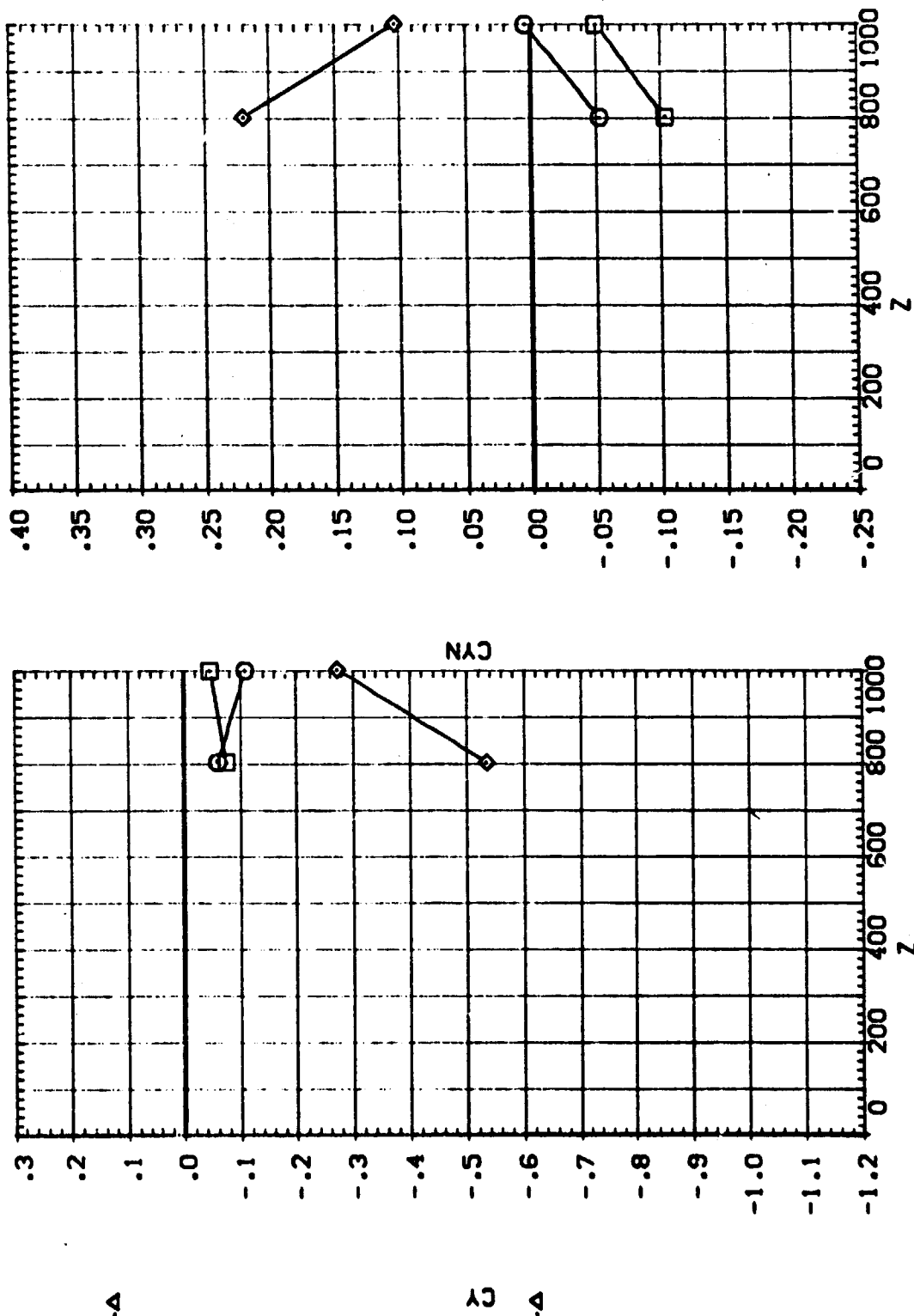
EFFECT OF SRB W/PLUMES SEPARATION ON 09B/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ256)

SYMBOL
 □
 ◇
 △

PARAMETRIC VALUES
 MACH 1.442
 ALPHA 200.500
 BETA 403.800
 PC+8 800.420
 P10TL 28.900
 DBETA 5.000
 PC+8 1500.000

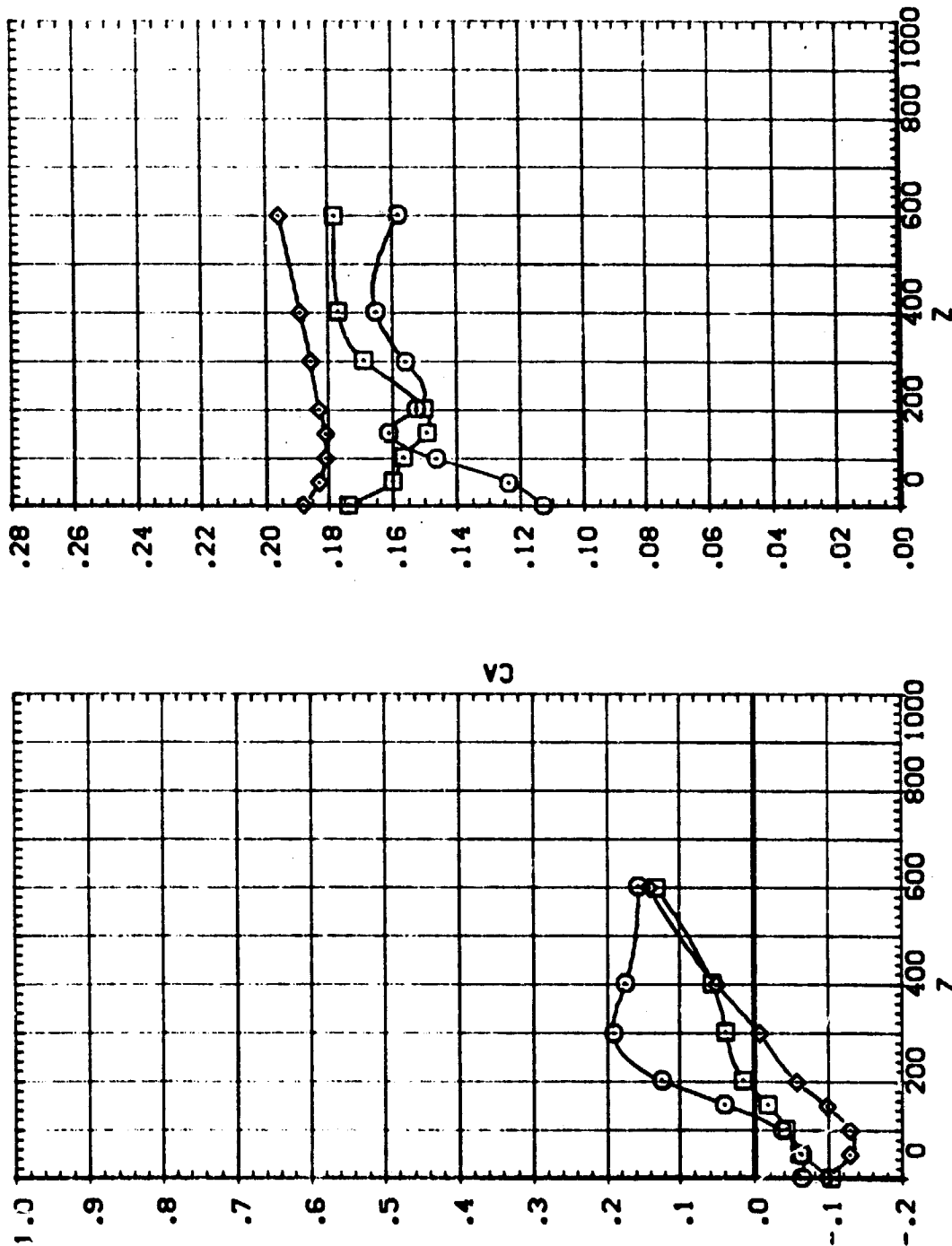
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RIJ259)

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|--------|----------|
| | | MACH | PTOTL | BETA | PC-MB |
| ○ | .113 | 4.510 | 28.900 | -5.000 | 5.000 |
| □ | 203.750 | .000 | 5.000 | 5.000 | 1500.000 |
| ◇ | 400.160 | .000 | 5.000 | 5.000 | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

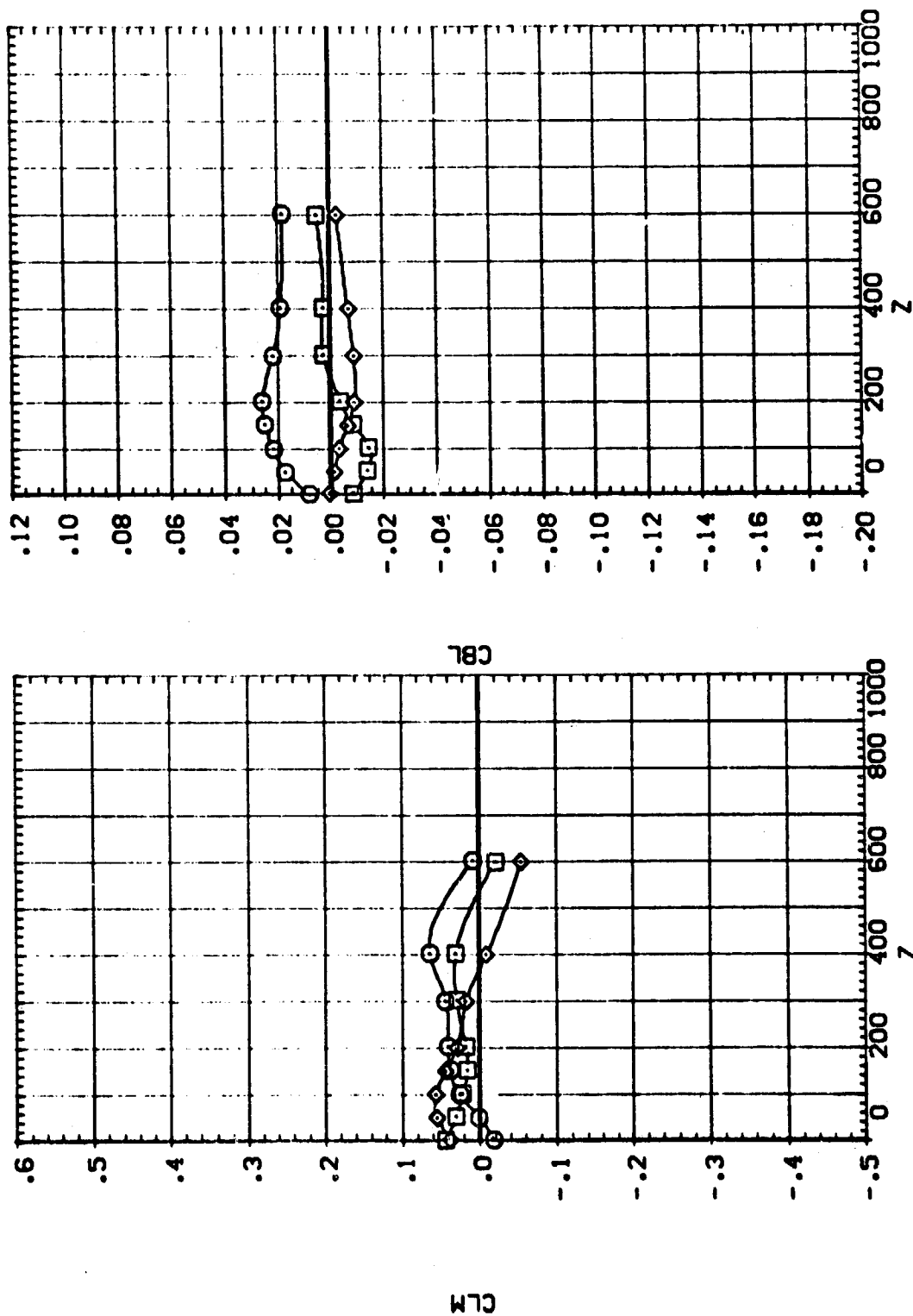


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ259)

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|-------|----------|--|
| | | MACH | 4.510 | PIOTL | 28.900 | |
| ○ | .119 | ALPHA | .000 | BETA | -5.000 | |
| □ | 203.350 | DALPHA | 5.000 | DBETA | 5.000 | |
| ◇ | 400.160 | X | .000 | PC-HB | 1500.000 | |

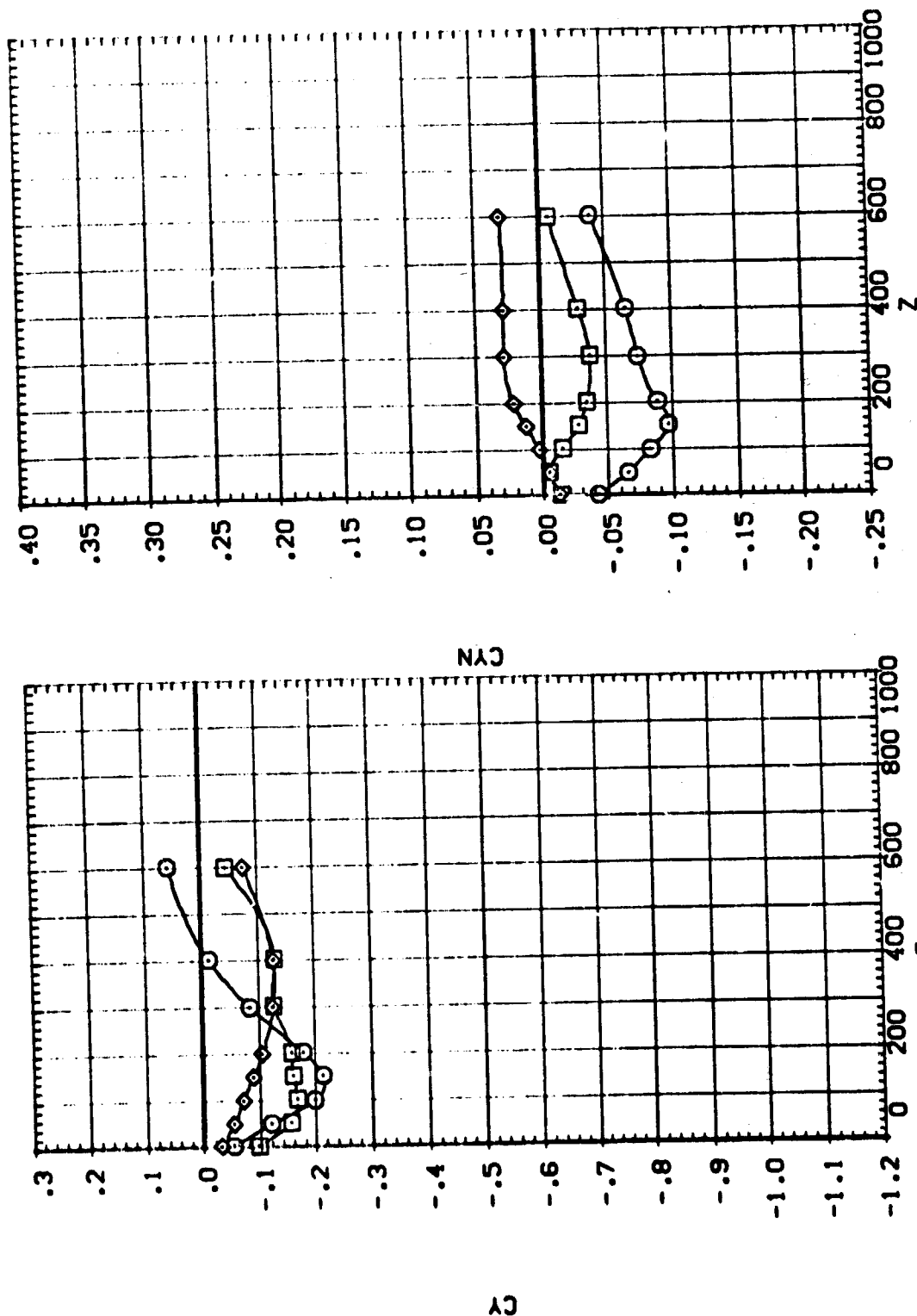
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ259)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL Y MACH PARAMETRIC VALUES
 203.350 .119 4.510 PTOTL 28.900
 400.160 .000 .000 BETA -5.000
 X 5.000 DBETA 5.000
 PC-HB 1500.000

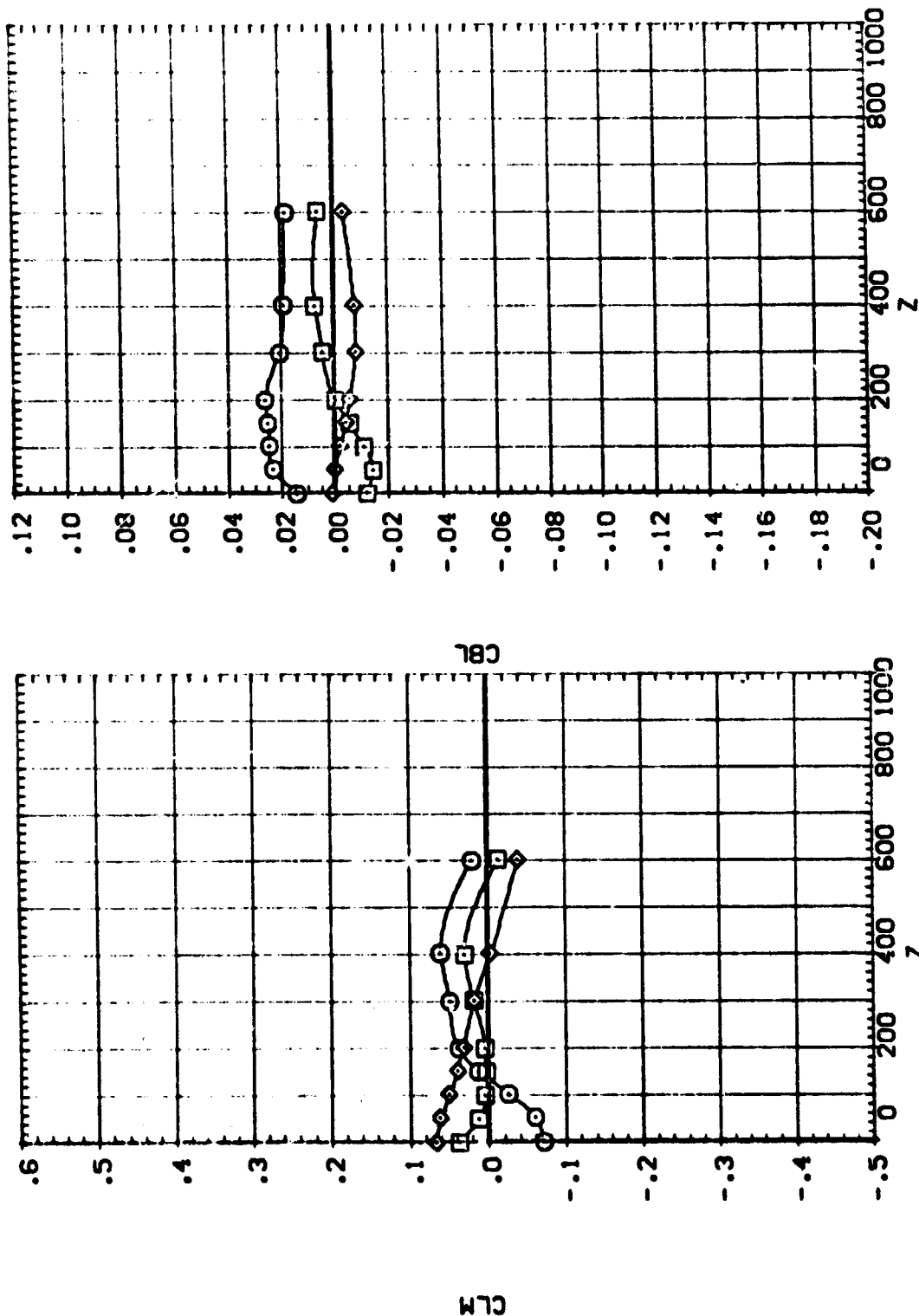


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ260)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|----------|
| | | MACH | PTOTL | BETA | PC+9 |
| ○ | 200.080 | 4.510 | 28.900 | .000 | 1500.000 |
| □ | 403.310 | .000 | 5.000 | .000 | |
| ◇ | | | | | |

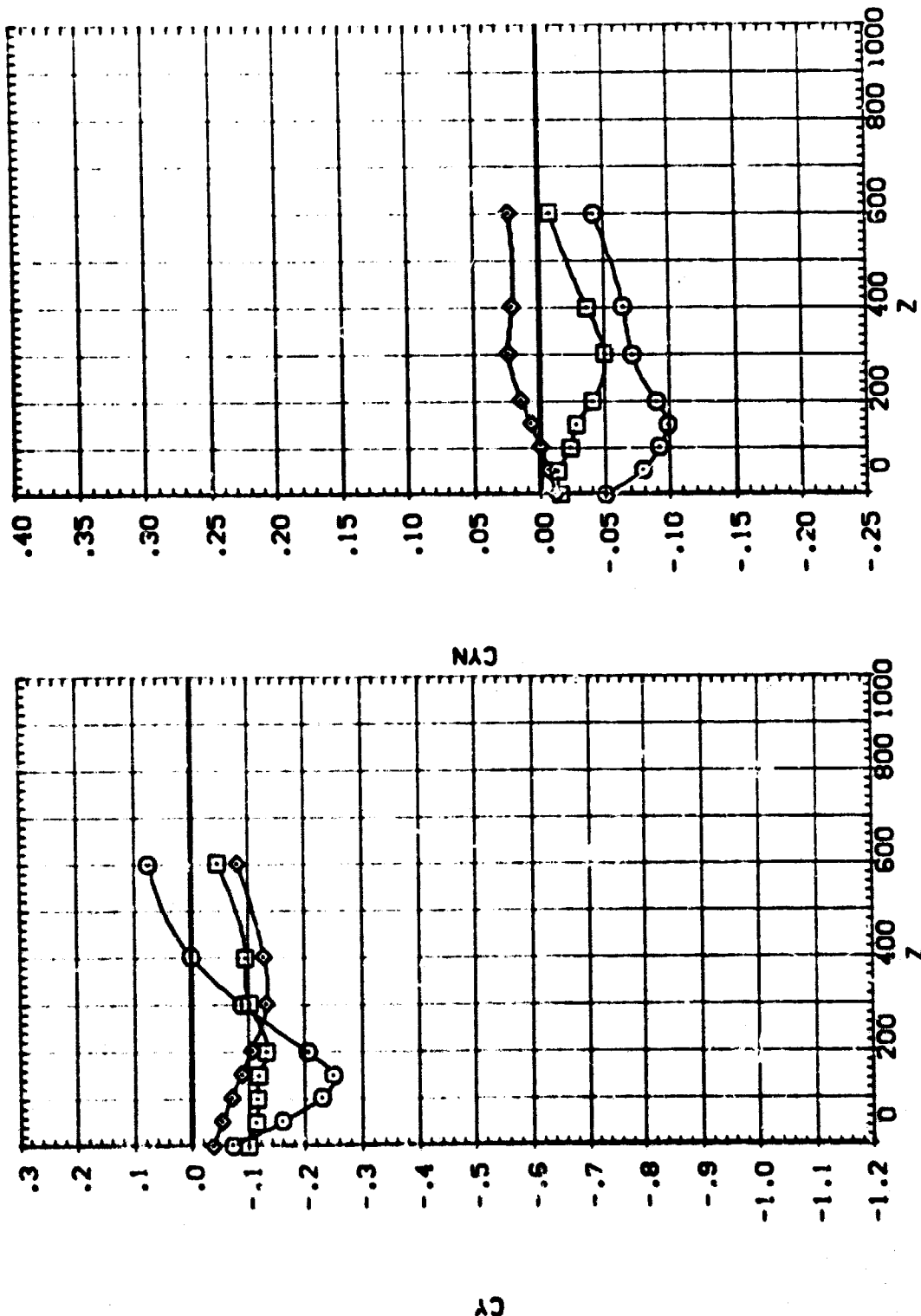


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ260)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL Y MACH PARAMETRIC VALUES 28.500 -5.000
 200.860 ALPHA .000 BETA .000
 403.310 D ALPHA .000 D BETA .000
 X .000 PCHB 1500.000

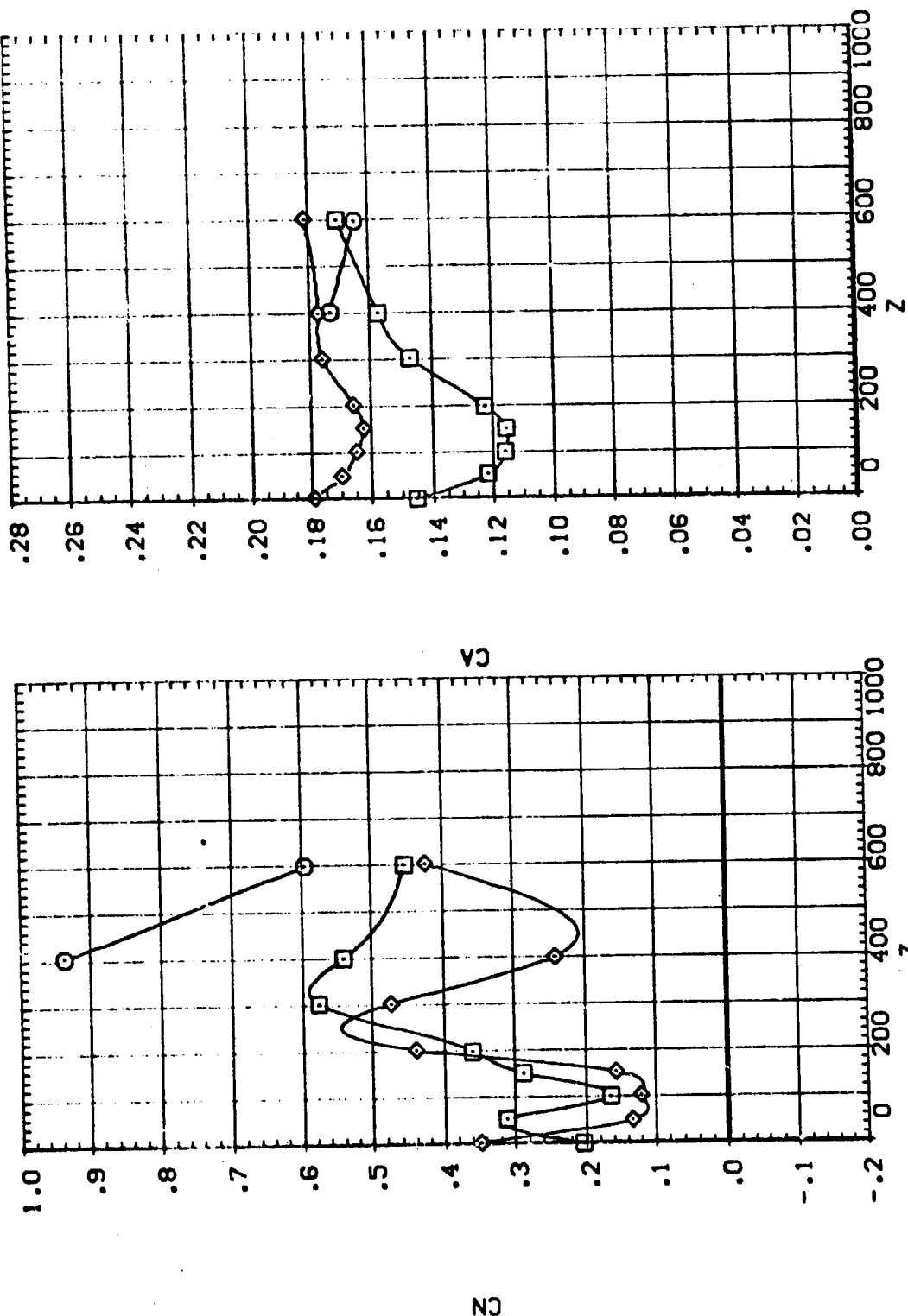


EFFECT OF SRB V/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ261)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|-------|----------|
| | | MACH | PTOTL | BETA | PC-HB |
| ○ | 200.130 | .641 | 4.510 | .000 | 28.900 |
| □ | 400.170 | ALPHA | 5.000 | DBETA | -5.000 |
| ◇ | X | | .000 | PC-HB | 1500.000 |



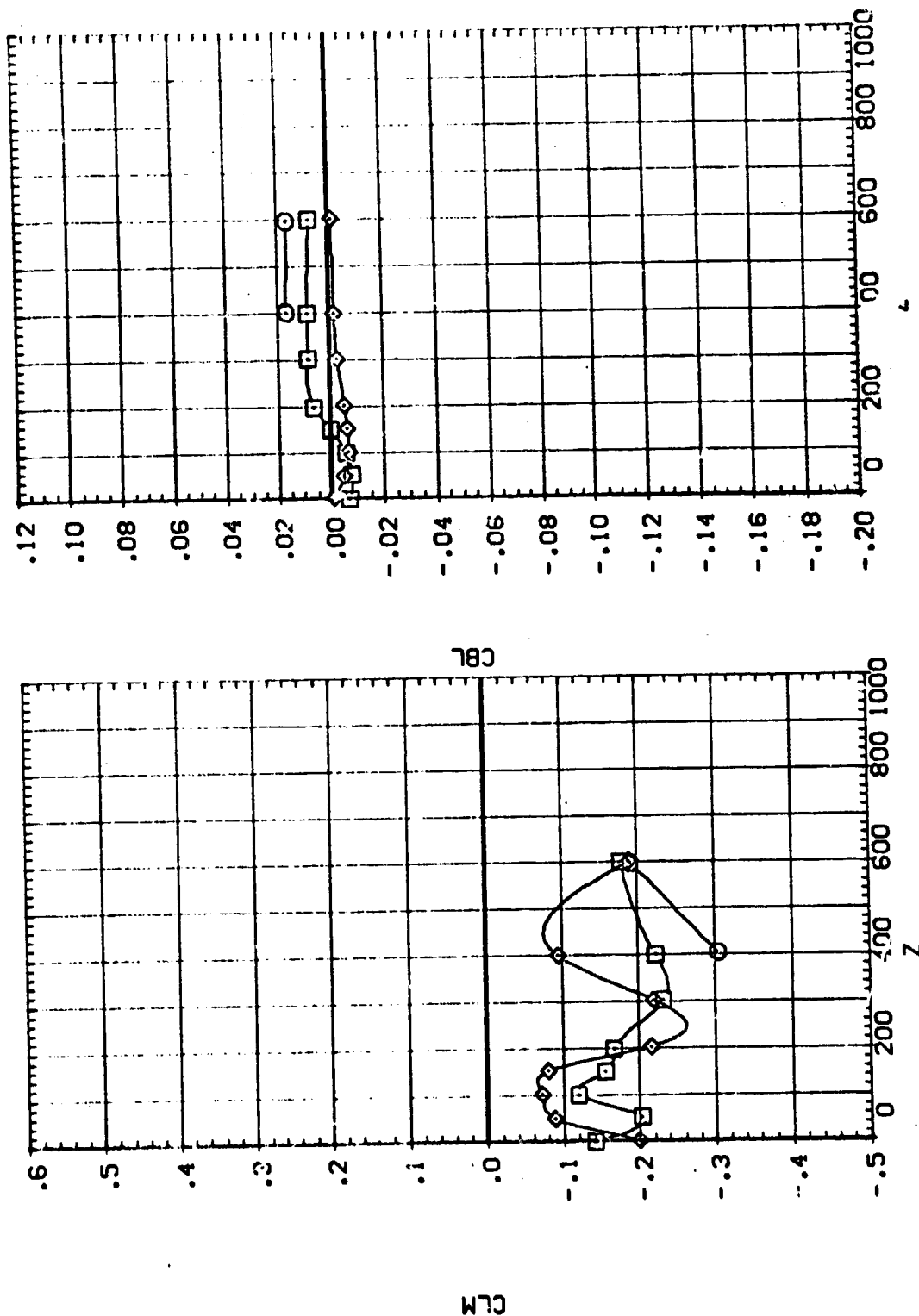
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ261)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

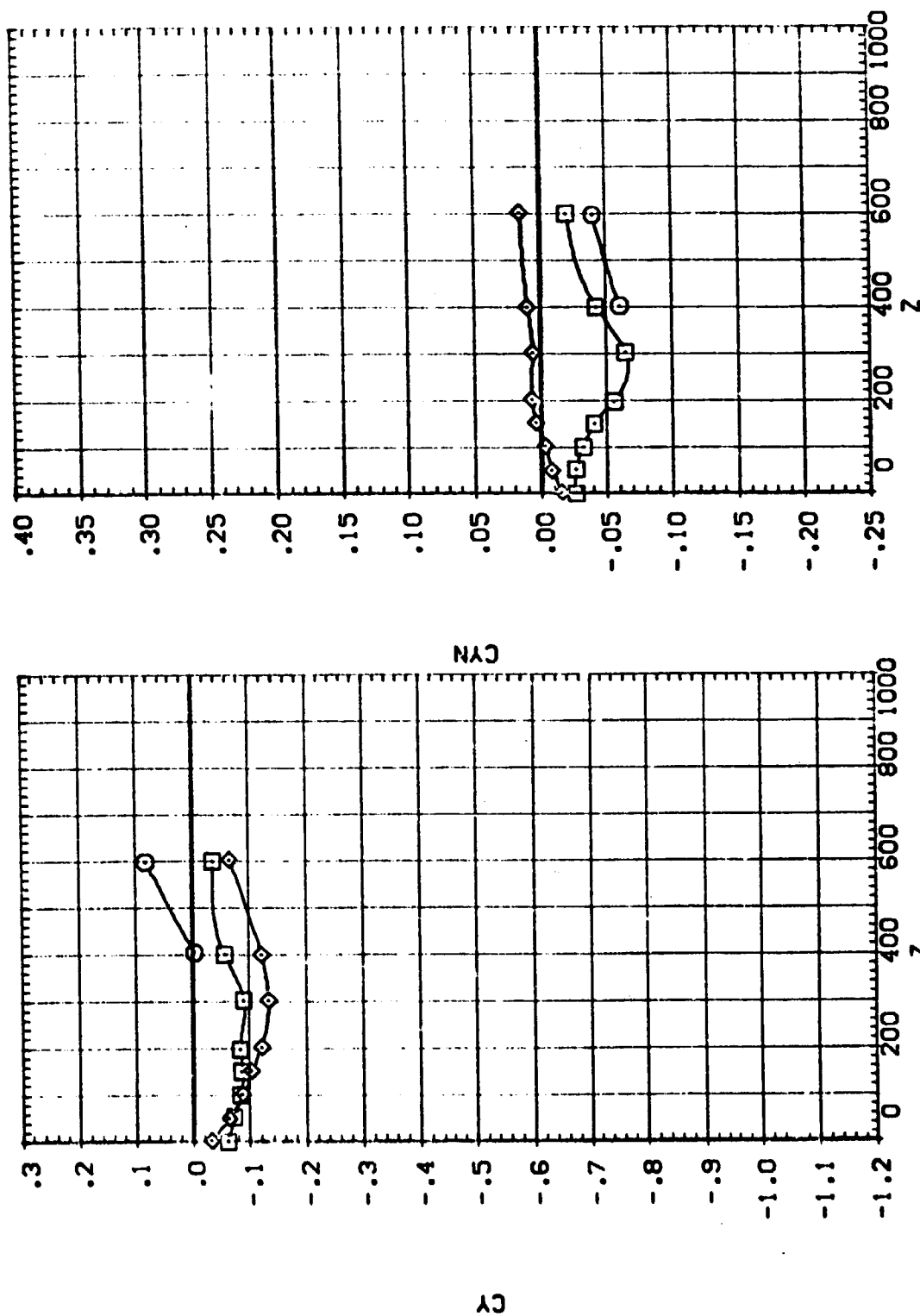
| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 4.510 |
| MACH | 28.900 |
| ALPHA | -5.000 |
| DALPHA | -5.000 |
| PCWB | 1500.000 |

SYMBOL
○ □ ◇



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | 4.51C | PITOTL | 28.900 |
| ○ | 200.130 | ALPHA | .000 | BETA | -5.000 |
| □ | 400.170 | DALPHA | 5.000 | DBETA | -5.000 |
| ◇ | X | | .000 | PCW8 | 1500.000 |

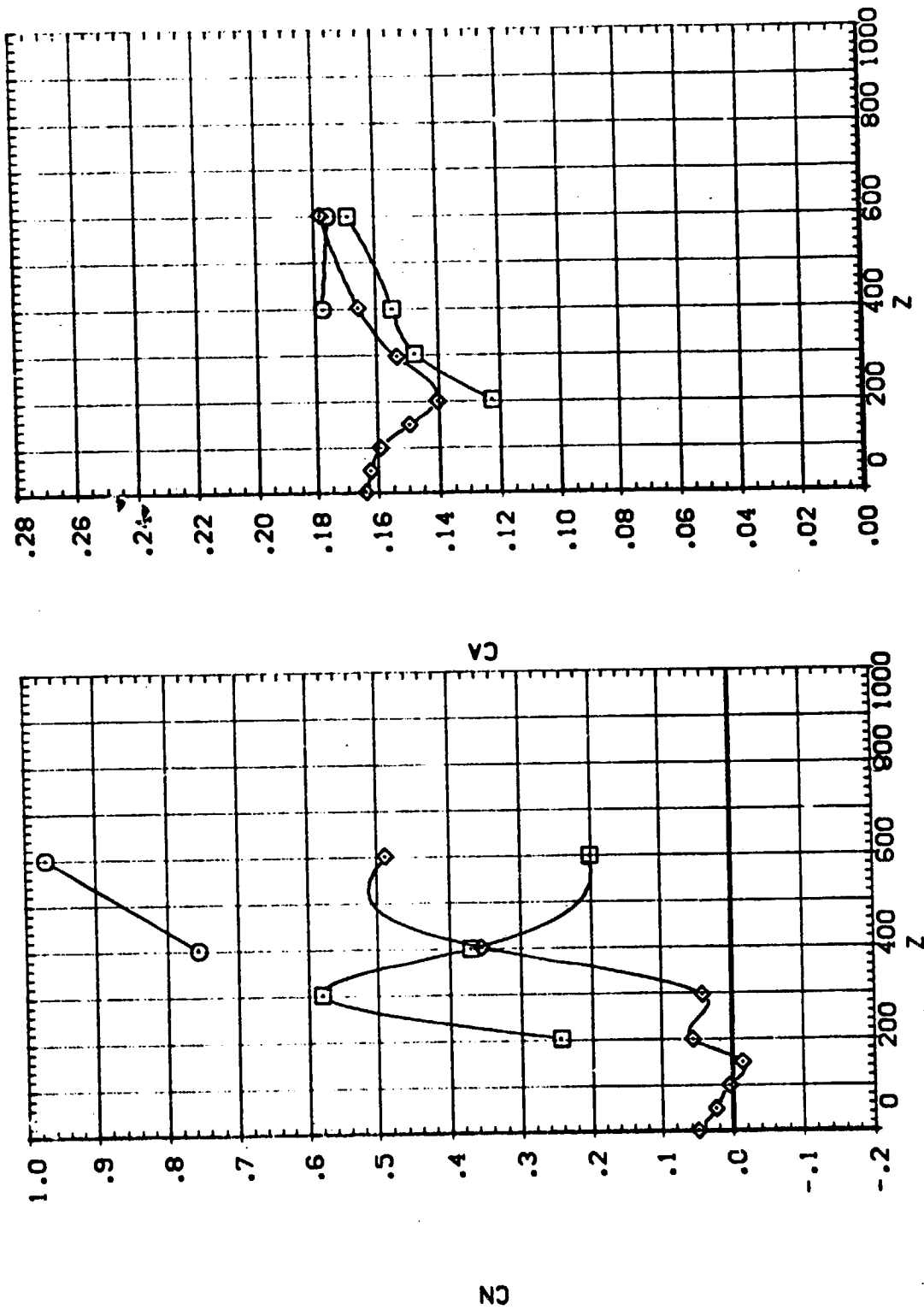


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ262)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|-------|-------|----------|--|
| | | MACH | 4.510 | PIOTL | 28.900 | |
| ○ | 3.036 | ALPHA | .000 | BCETA | -5.000 | |
| □ | 200.490 | DALPHA | 5.000 | DBETA | -10.000 | |
| ◇ | 399.140 | X | .000 | PC#8 | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ262)

SYMBOL

□ ◇

Y

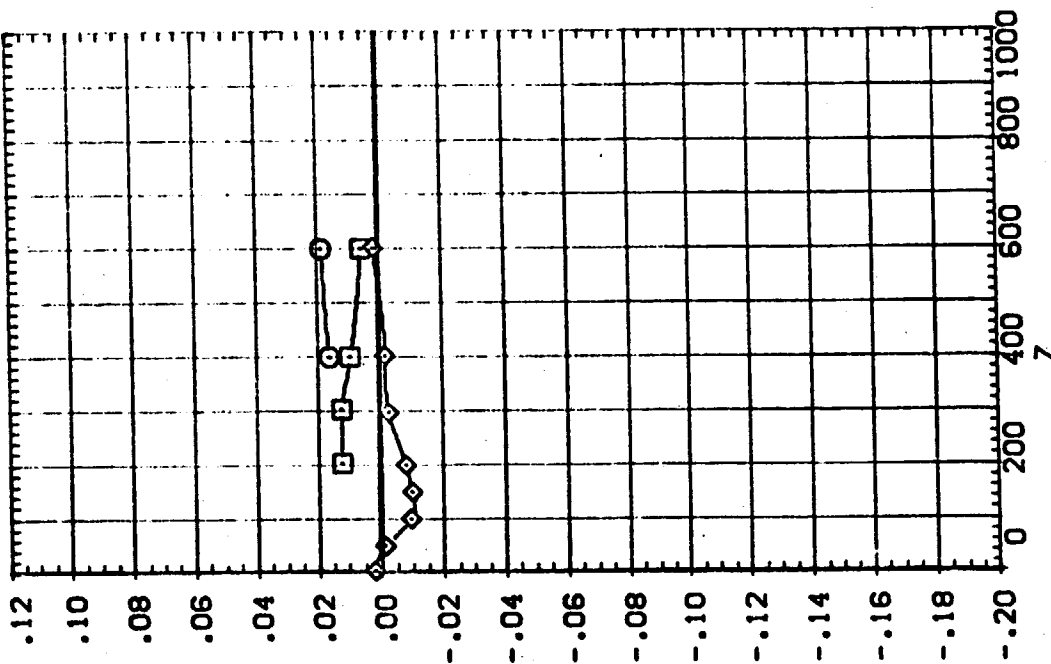
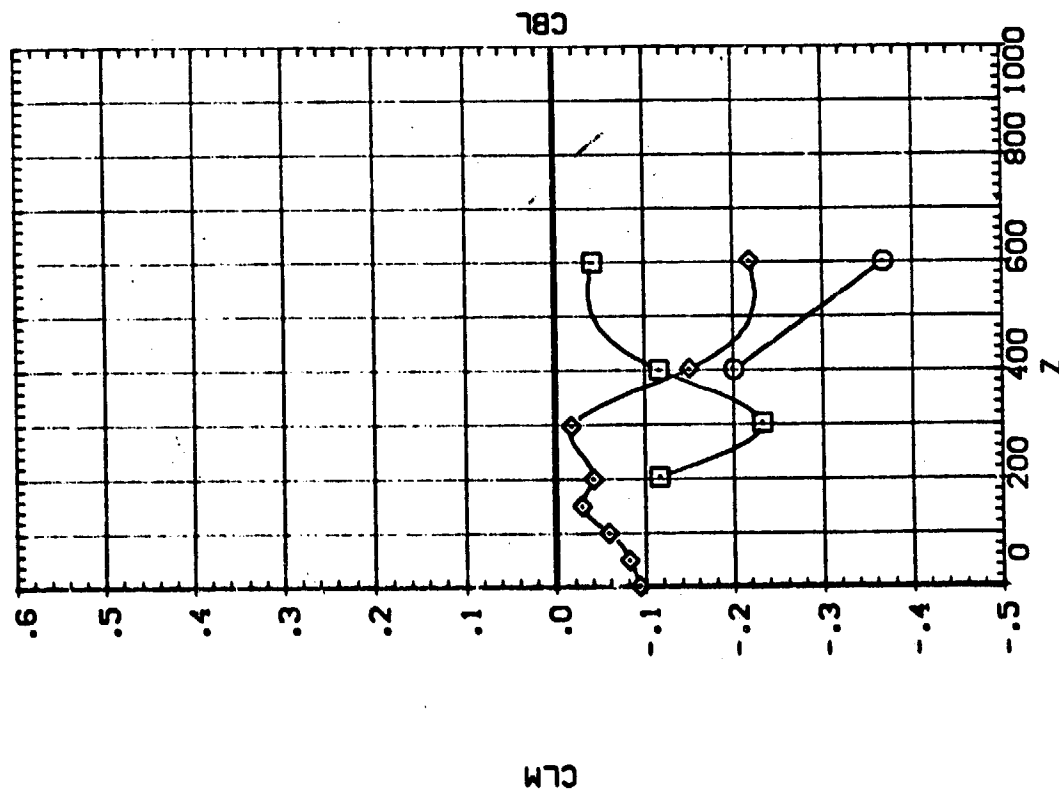
3.036
200.490
399.140

MACH
ALPHA
DALPHA
X

PARAMETRIC VALUES

4.510 PTOTL 28.900
.000 BETA -5.000
5.000 DBETA -10.000
.000 PC448 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

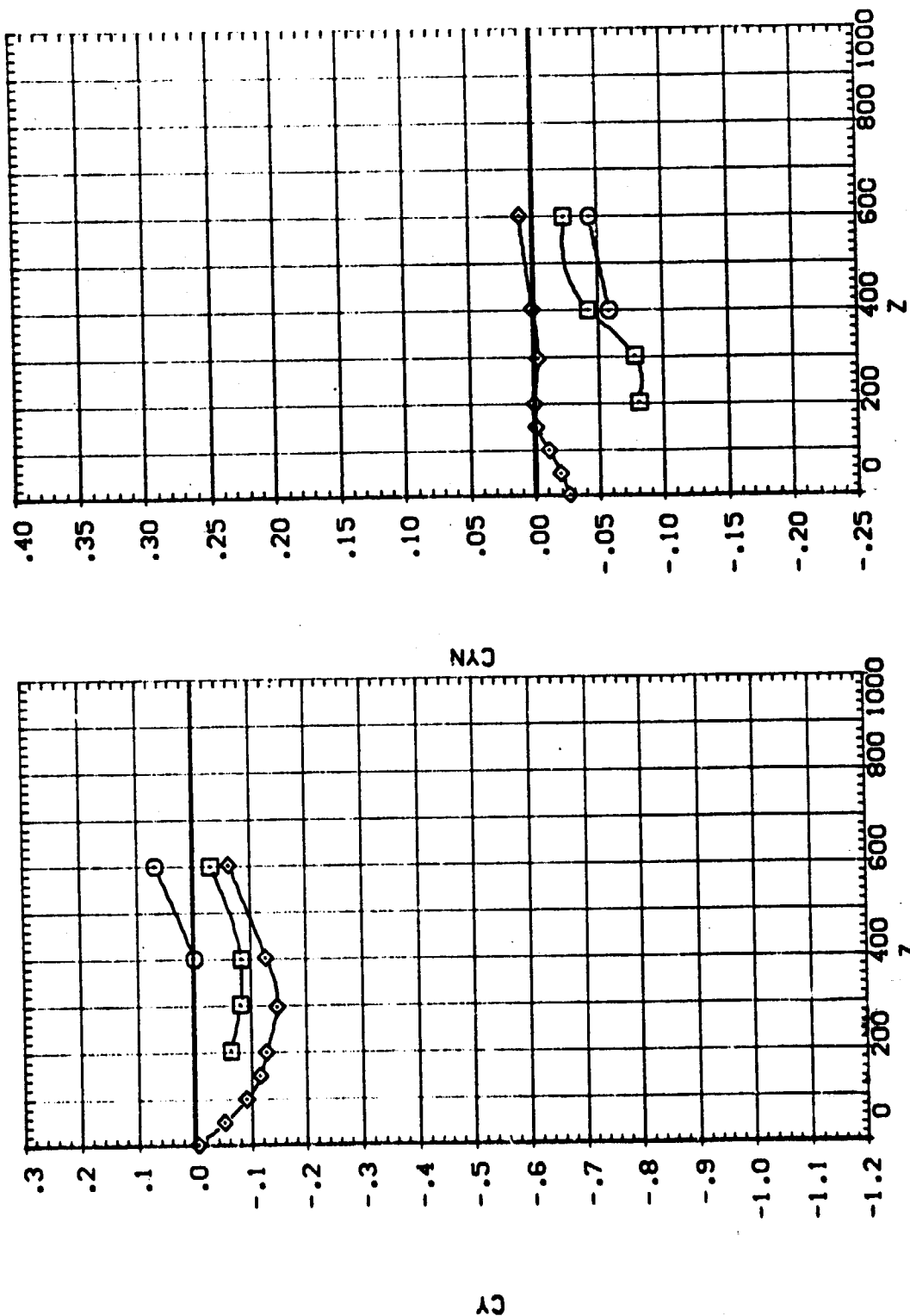


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ262)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|----------|
| | | MACH | PTOTL | BETA | PC+PB |
| ○ | 3.036 | 4.510 | 28.900 | | |
| □ | 200.490 | .000 | -5.000 | | |
| ◇ | 399.140 | 5.000 | -10.000 | | |
| | | X | | | 1500.000 |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ263)

SYMBOL

Y
200.420
400.990

MACH
ALPHA
DALPHA
X

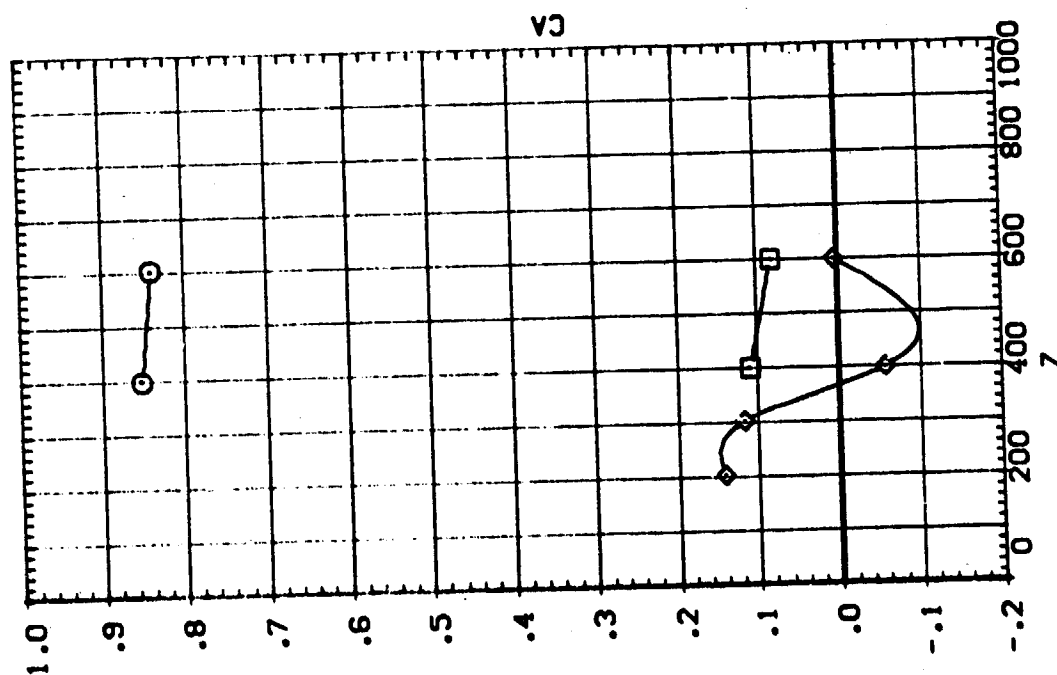
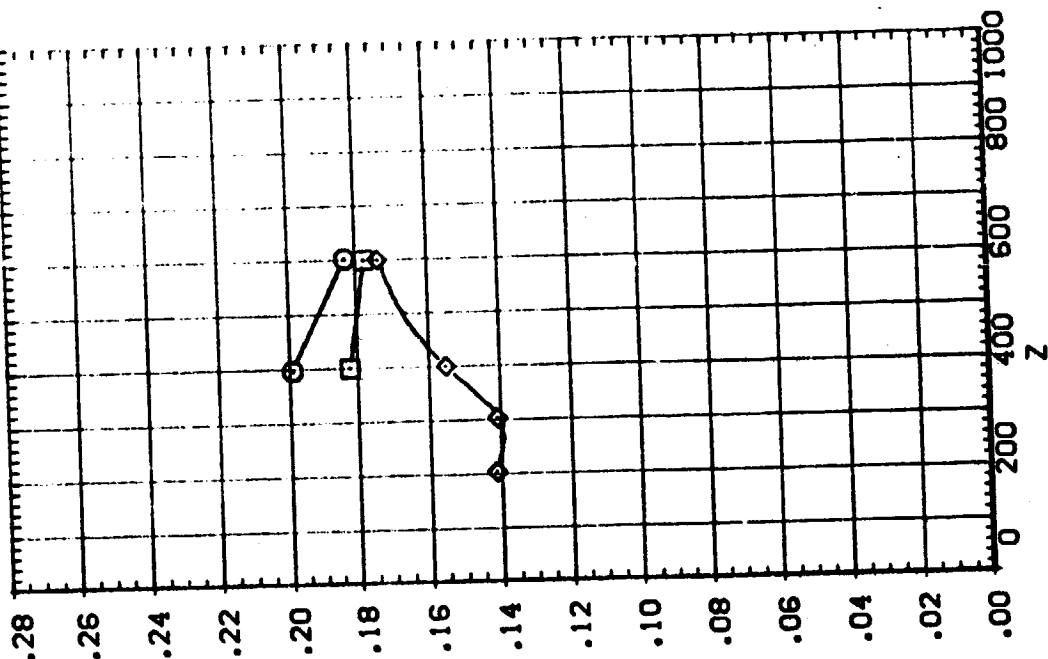
PARAMETRIC VALUES

4.510
.000
5.000
.000

PIOTL
BETA
DBETA
PC-MB

28.900
-5.000
-20.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



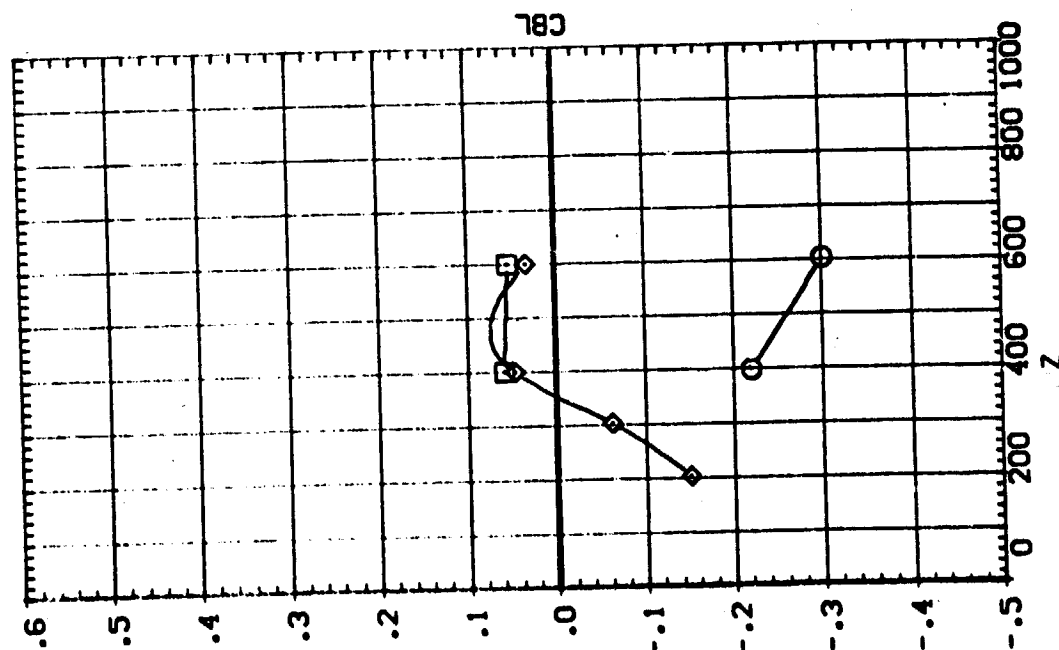
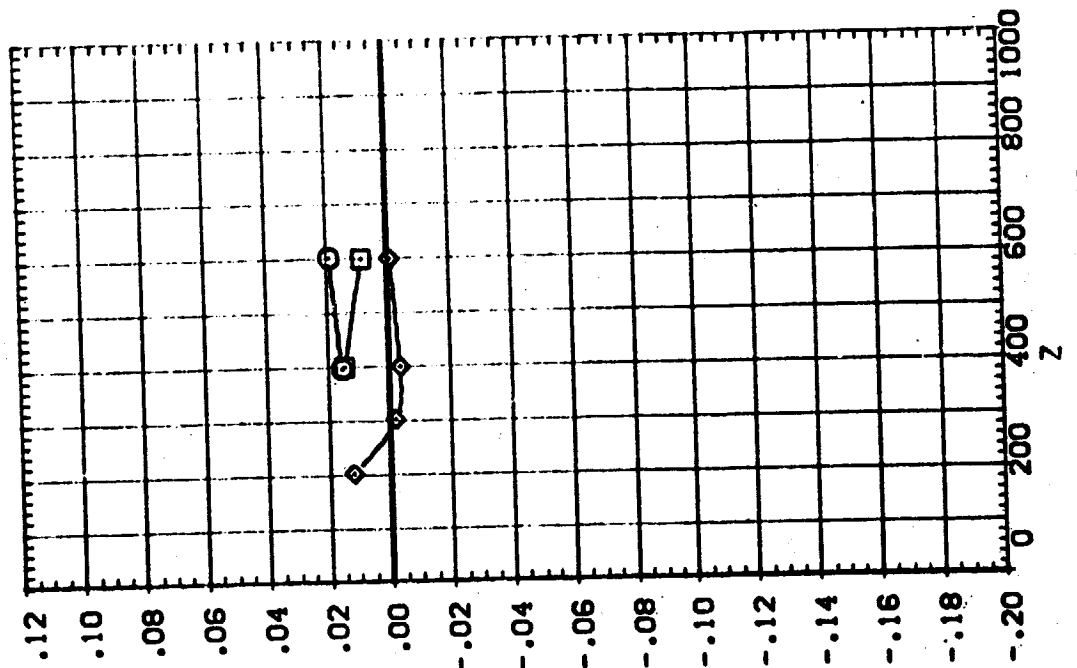
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

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IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ263)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

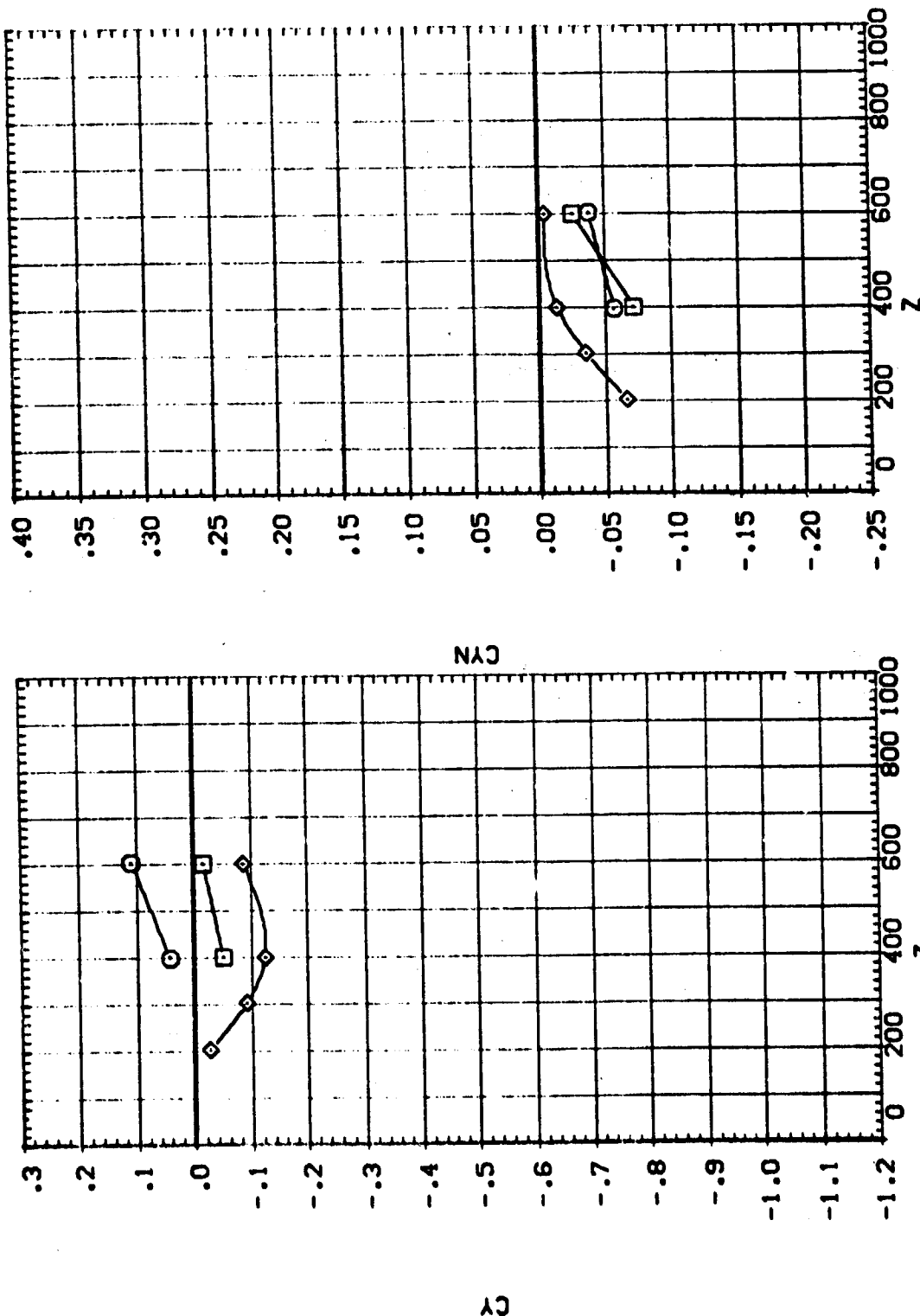
| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | PTOTL | 28.900 | |
| ○ | 200.420 | ALPHA | .000 | BETA | -5.000 |
| □ | 400.980 | DALPHA | 5.000 | DBETA | -20.000 |
| ◇ | | X | .000 | PCH#8 | 1500.000 |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL Y MACH ALPHA X
 O 200.420 .883
 □ 400.980 .883
 ◇ 400.980 .883

PARAMETRIC VALUES
 4.510 PTOTL 28.900
 .000 BETA -5.000
 5.000 DBETA -20.000
 .000 PC+PB 1500.000

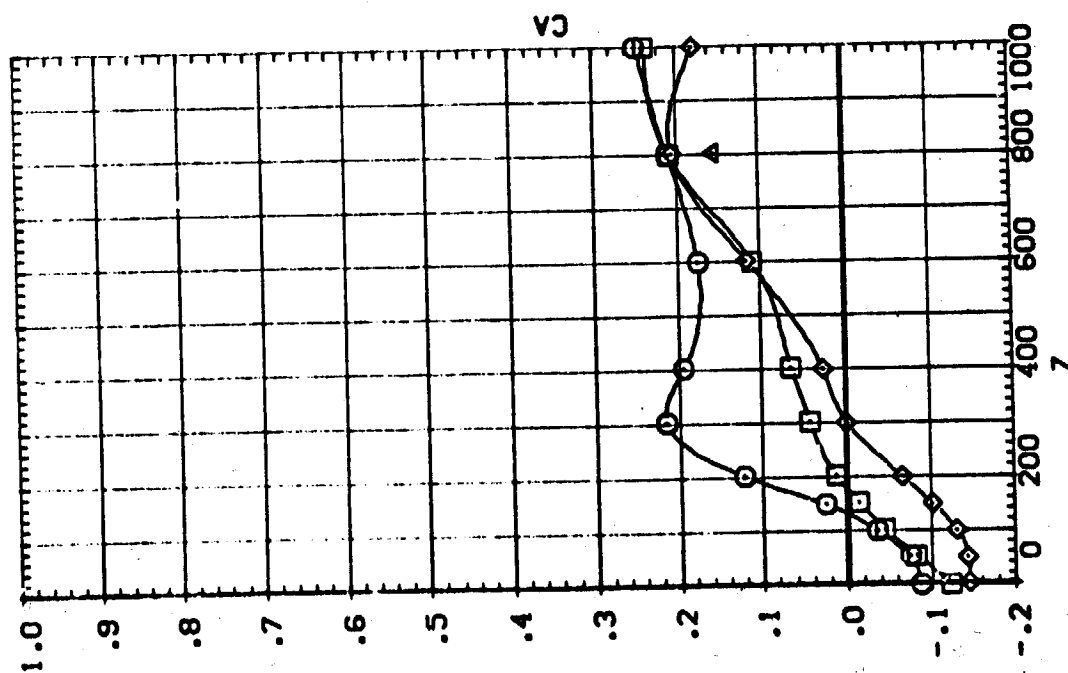
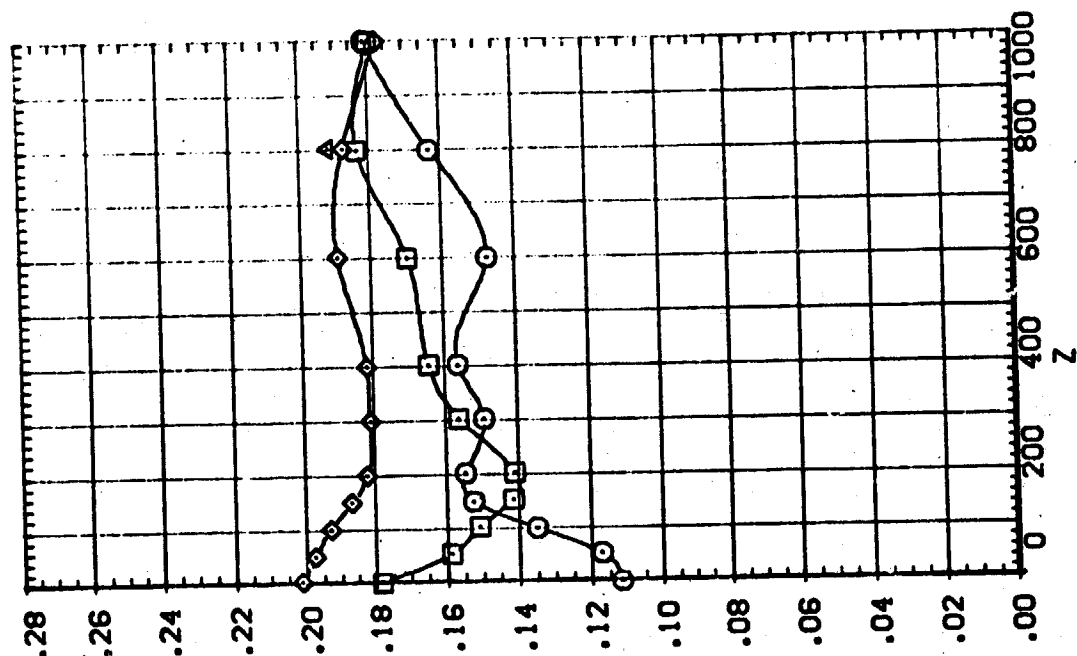


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ264)

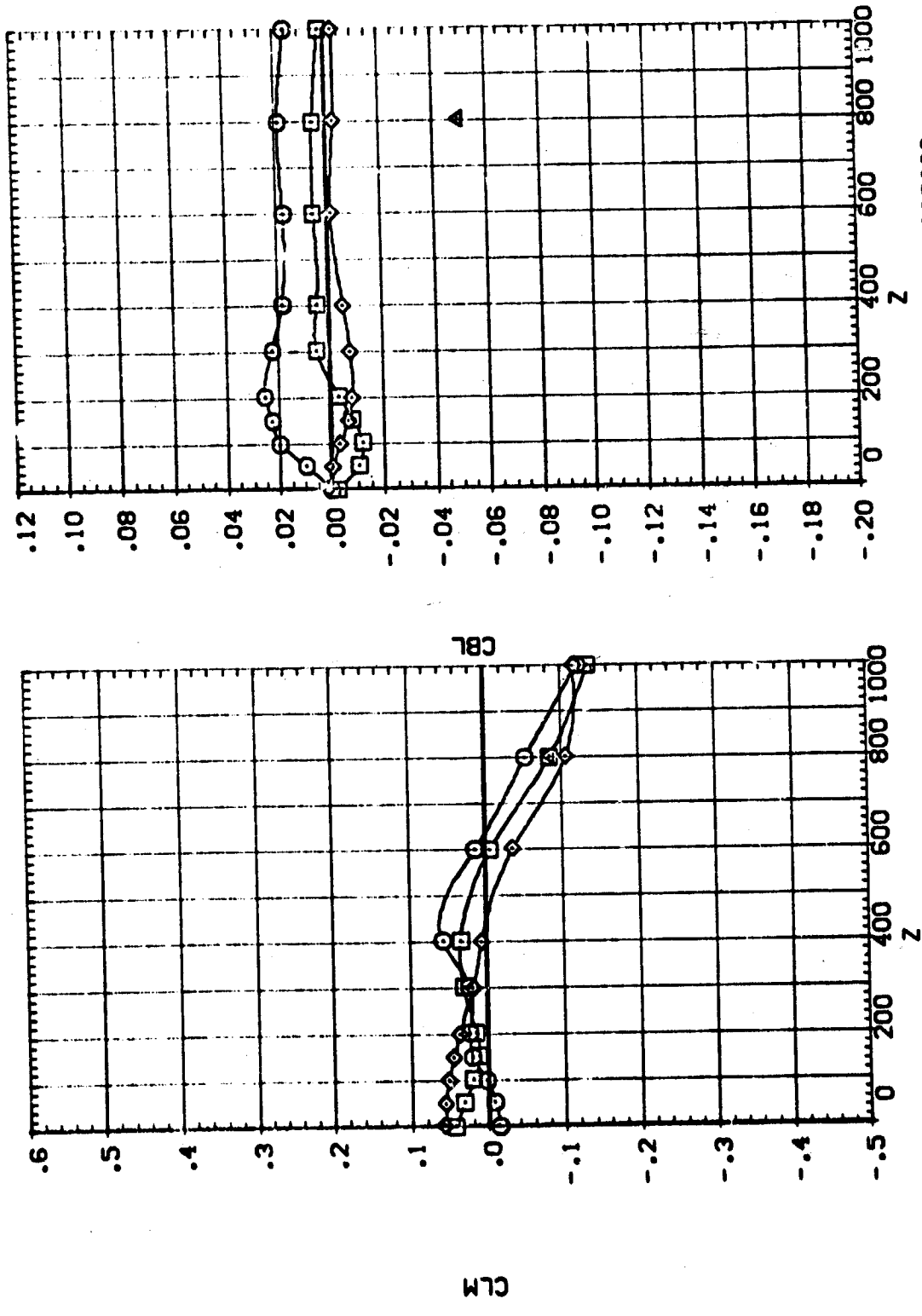
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA SETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.450 | ALPHA | .000 | BETA | -5.000 | |
| □ | 400.380 | DALPHA | .000 | DBETA | 5.000 | |
| ◇ | 800.000 | X | .000 | PCMB | 1500.000 | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYM-BOL | PARAMETRIC VALUES | | | |
|---------|-------------------|--------|--------|-------|
| | MACH | PTOTL | BETA | DBETA |
| ○ | -.170 | 4.510 | .000 | .000 |
| □ | 200.450 | .000 | .000 | .000 |
| ◇ | 400.380 | .000 | .000 | .000 |
| △ | 800.000 | 28.900 | -5.000 | 5.000 |

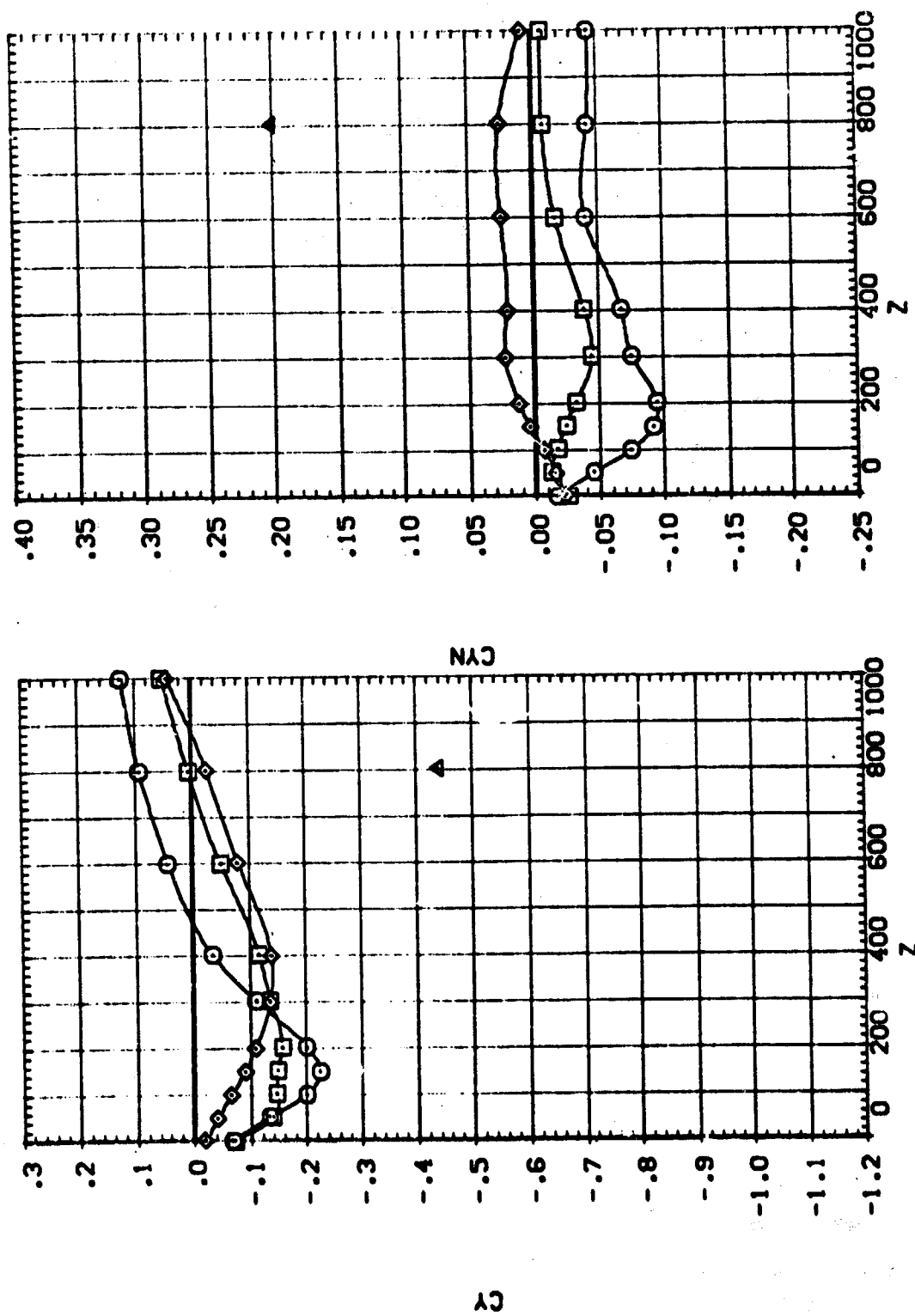


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ264)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

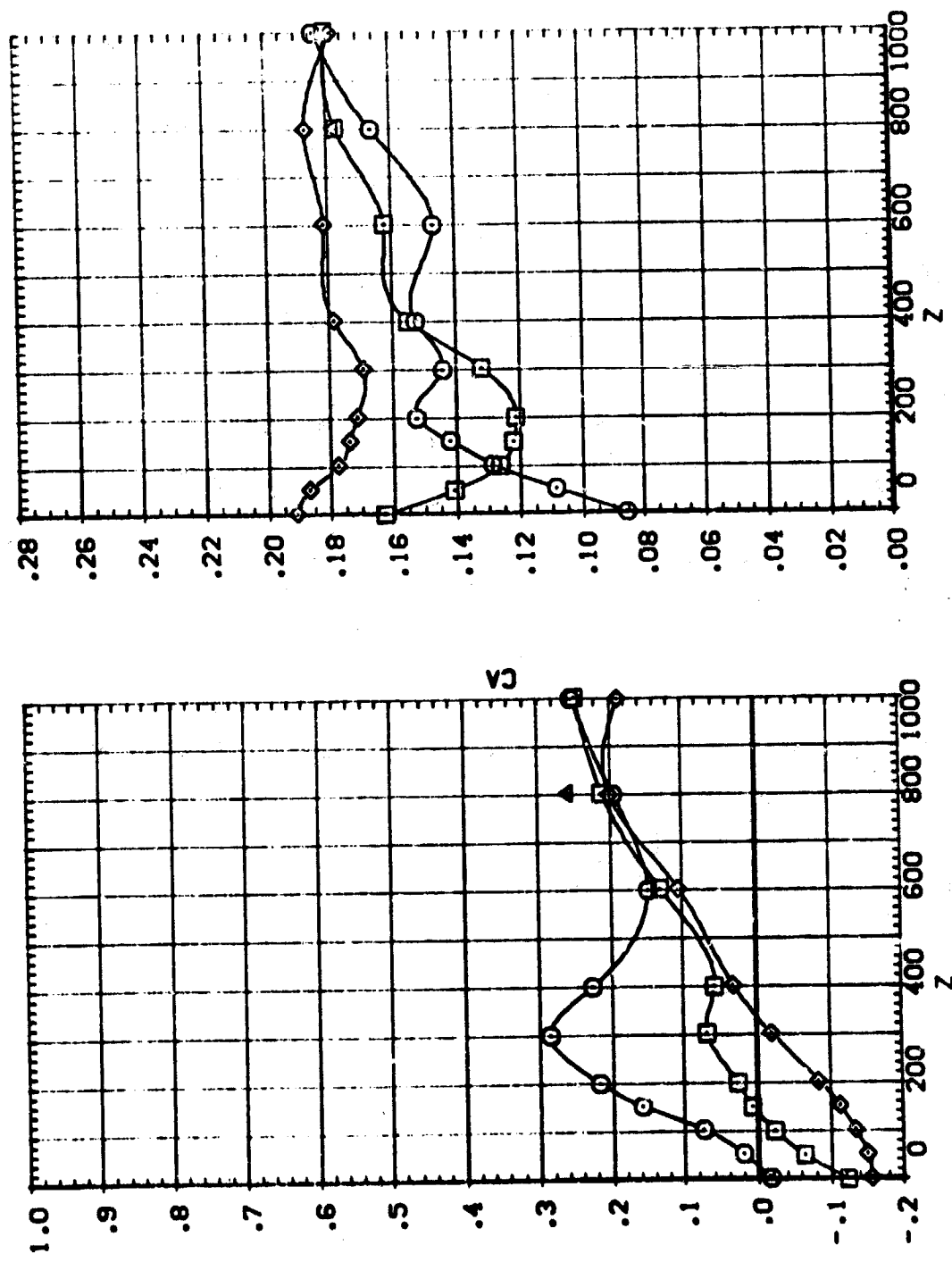
| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|-------|-------|----------|
| | Y | MACH | PTOTL | 28.900 |
| ○ | -0.170 | 4.510 | BETA | -5.000 |
| □ | 200.450 | .000 | DBETA | 5.000 |
| ◇ | 400.380 | .000 | PC+PB | 1500.000 |
| △ | 800.000 | X | | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ265)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | 20.000 |
|--------|---------|-------|-------------------|----------|
| ○ | -701 | 4.510 | P10TL | -5.000 |
| □ | 199.910 | .000 | BETA | .000 |
| ◇ | 401.900 | .000 | DBETA | .000 |
| △ | 800.110 | .000 | PCMB | 1500.000 |

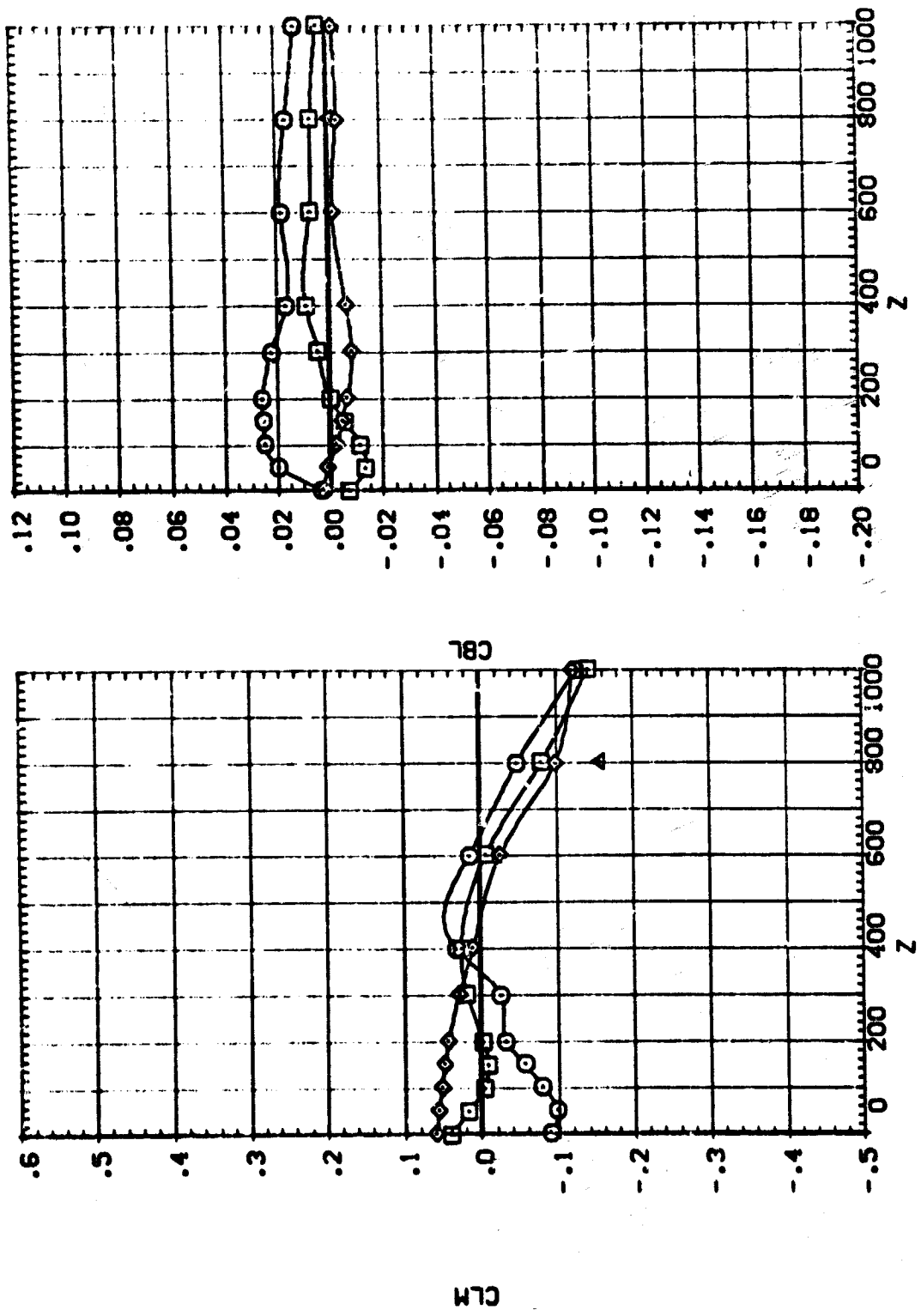


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ265)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

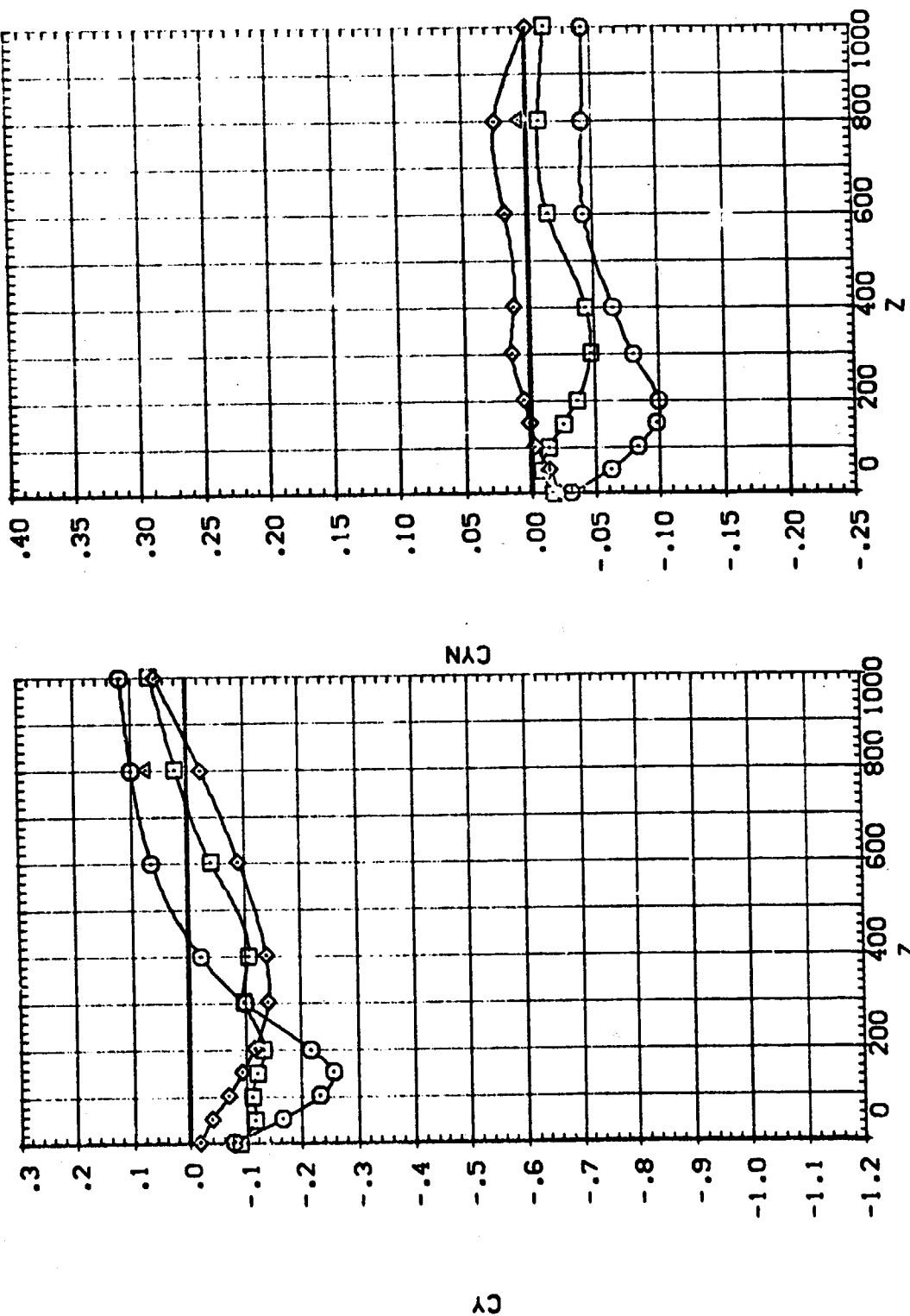
| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.800 | |
| ○ | 199.910 | ALPHA | .000 | BETA | -5.000 | |
| □ | 401.900 | ALPHA | .000 | DBETA | .000 | |
| ◇ | 800.110 | K | .000 | PC+PB | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ265)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | -701 | 4.510 | P10TL 28.900 |
| □ | 199.910 | .000 | BETA -5.000 |
| ◇ | 401.900 | .000 | DBETA .000 |
| △ | 800.110 | .000 | PC4#B 1500.000 |

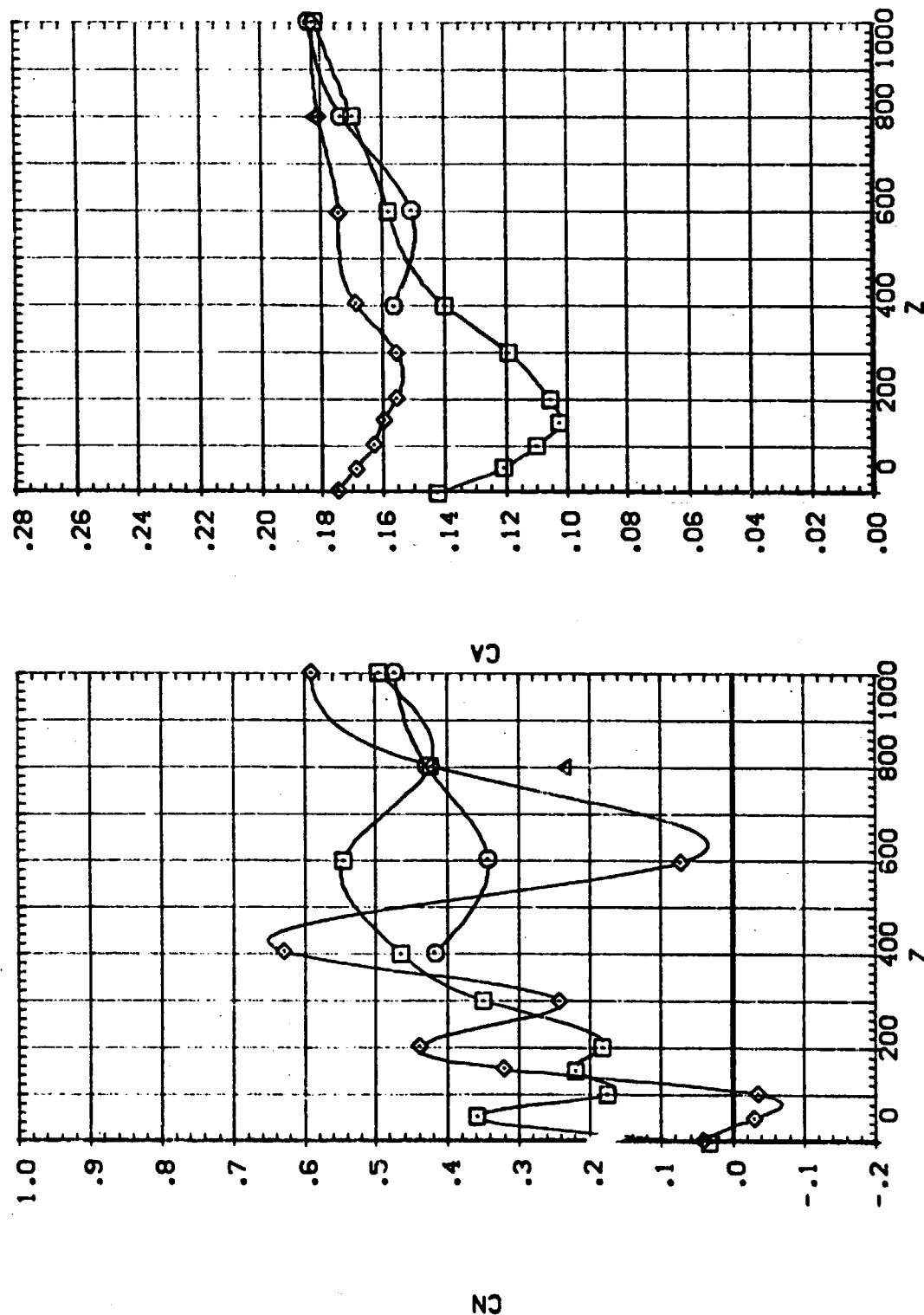


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ266)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|----------|------|-------|-------|
| | | MACH | PTOTL | BETA | DBETA | PCHMB |
| ○ | .731 | 4.510 | 28.900 | | | |
| □ | 200.500 | .000 | -5.000 | | | |
| ◇ | 400.460 | .000 | -5.000 | | | |
| △ | 801.540 | .000 | 1500.000 | | | |

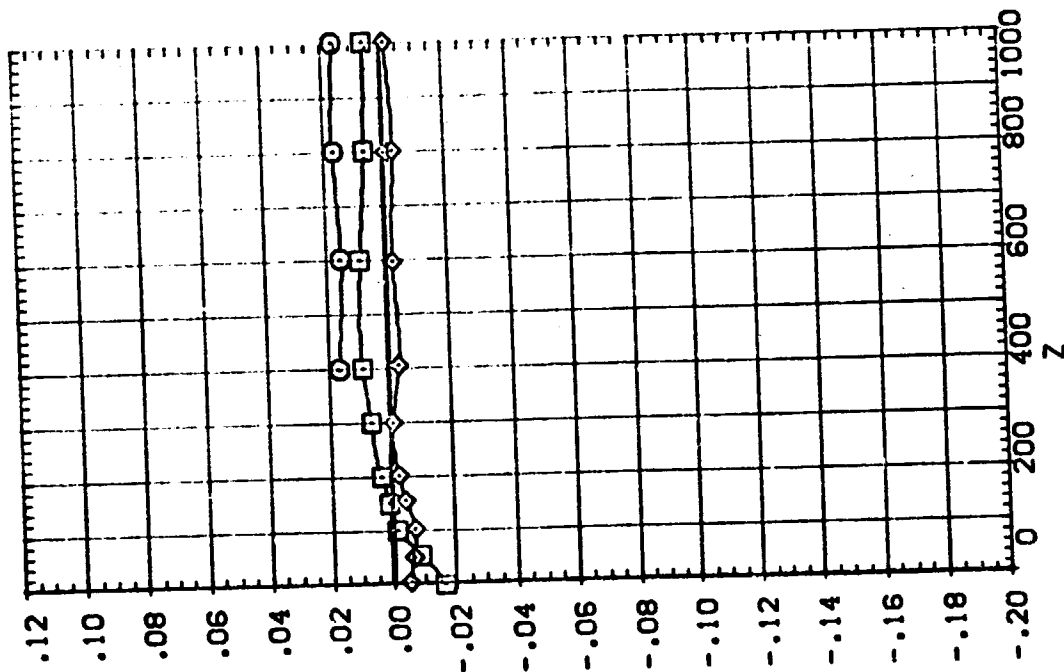
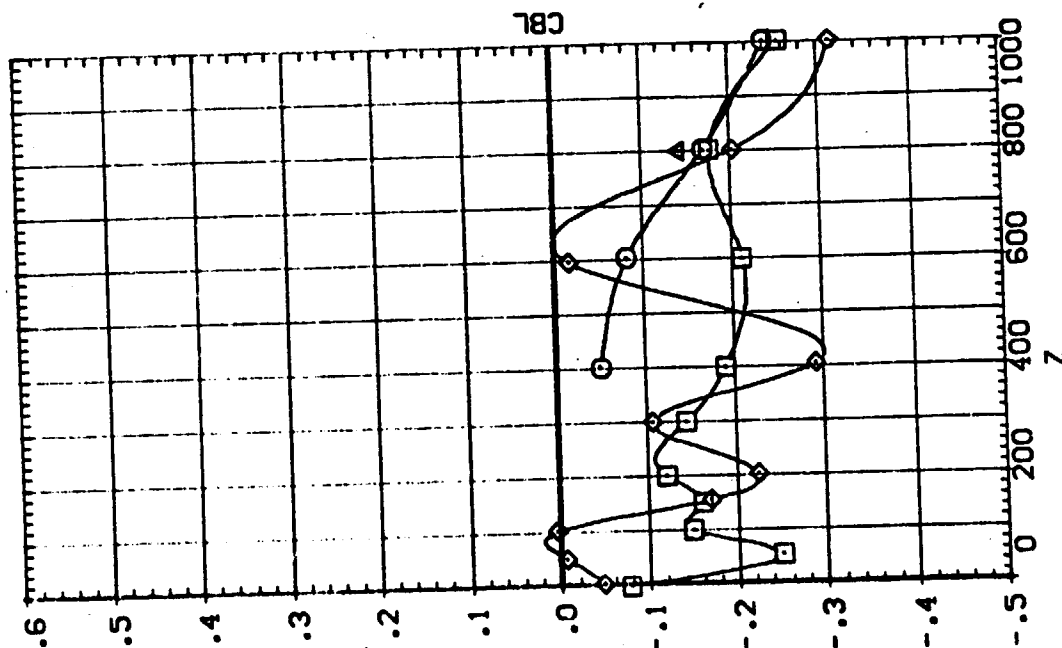


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ266)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| MAOH | 28.500 |
| PIOTL | -5.000 |
| BETA | -5.000 |
| PC#B | 1500.000 |

SYMBOL
 ○
 □
 ◇
 △

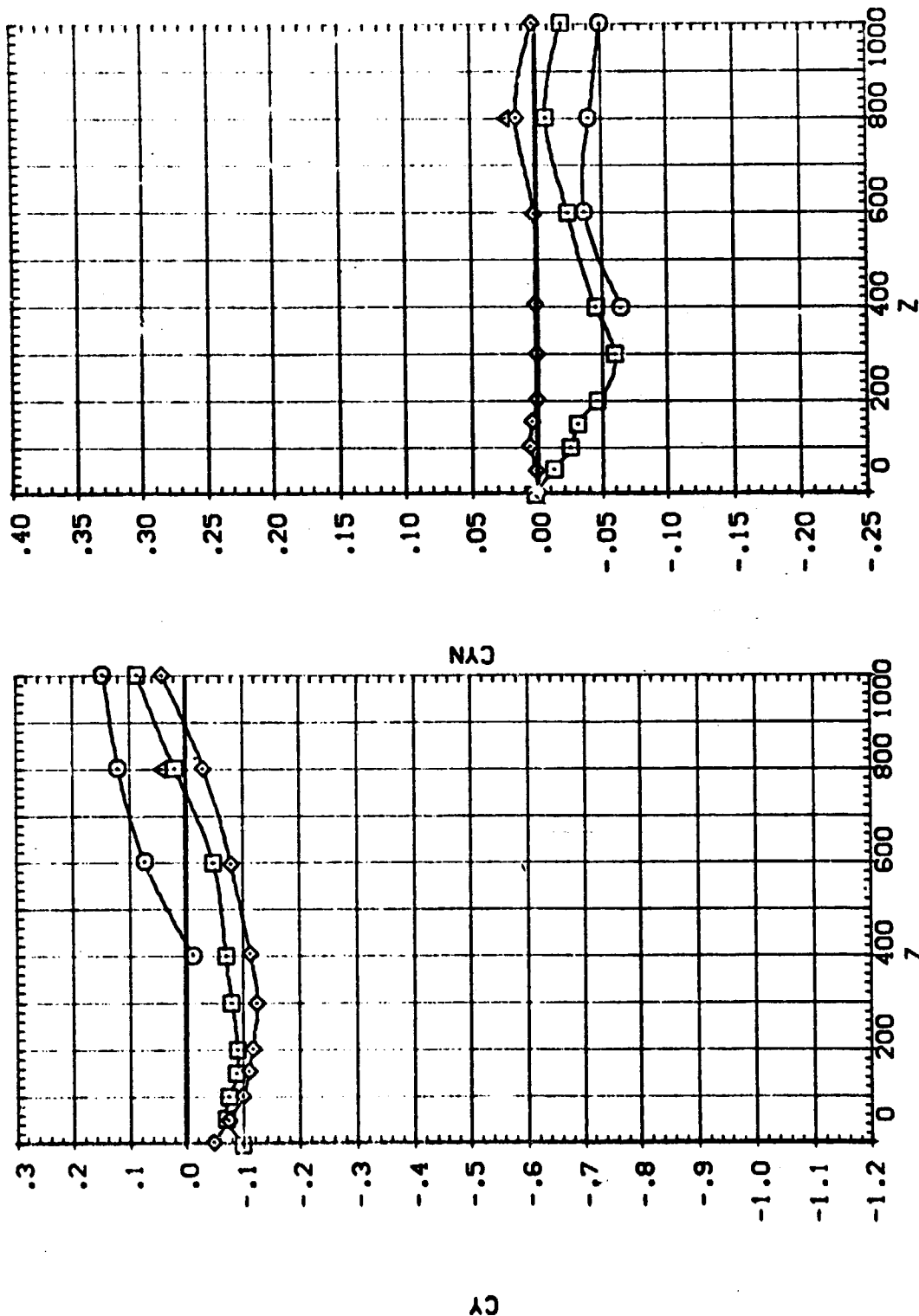


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ266)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | |
|--------|---------|-------|-------------------|----------|
| ○ | .731 | 4.510 | PTOTL | 26.900 |
| □ | 200.500 | .000 | BETA | -5.000 |
| ◇ | 400.460 | .000 | DBETA | -5.000 |
| △ | 801.540 | .000 | PC+PB | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ267)

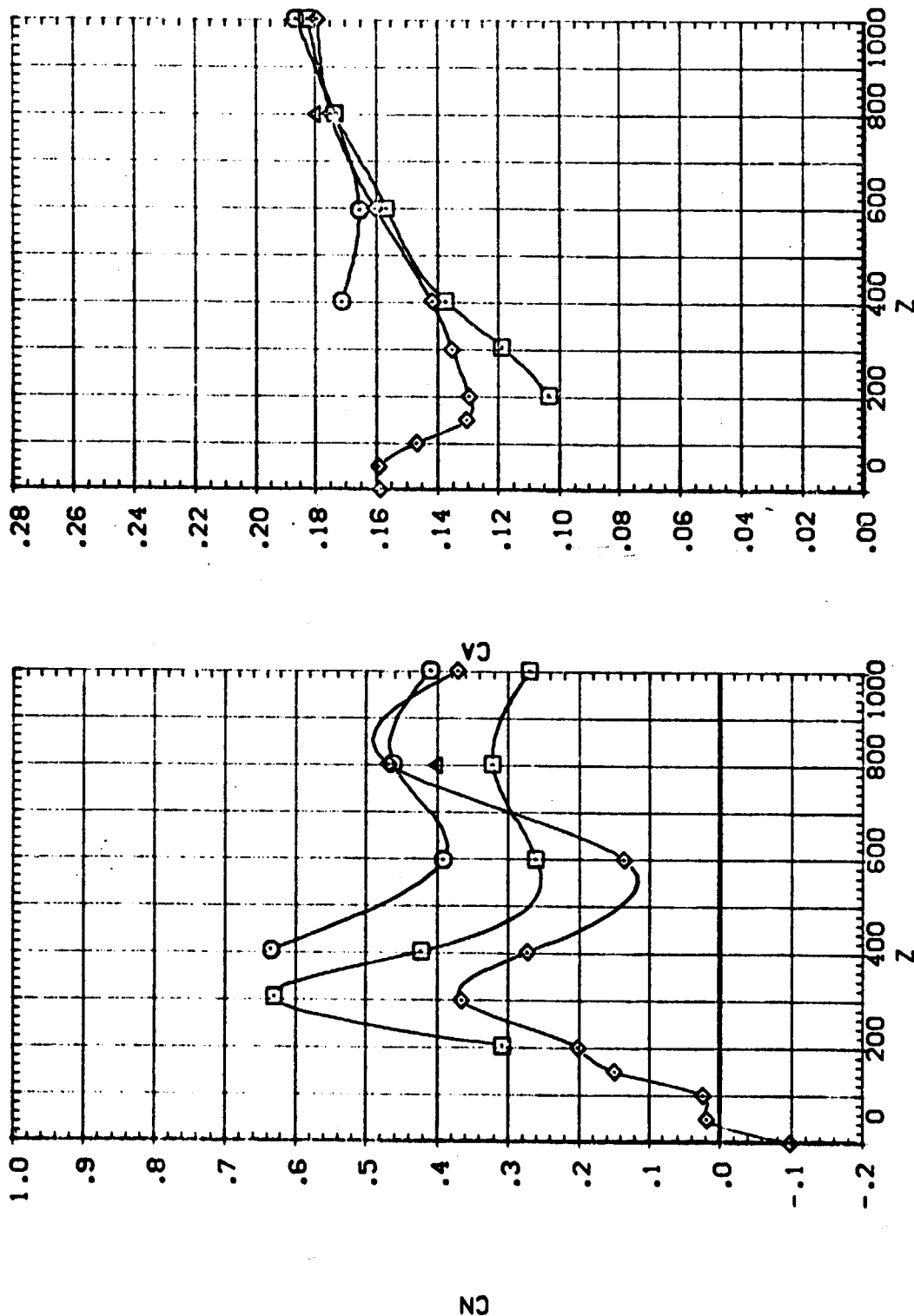
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| Y | MACH | 4.510 | PTOTL | 28.900 |
|---------|--------|-------|-------|----------|
| 199.930 | ALPHA | .000 | BETA | -5.000 |
| 399.770 | DALPHA | .000 | DBETA | -10.000 |
| 601.270 | X | .000 | PC#8 | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

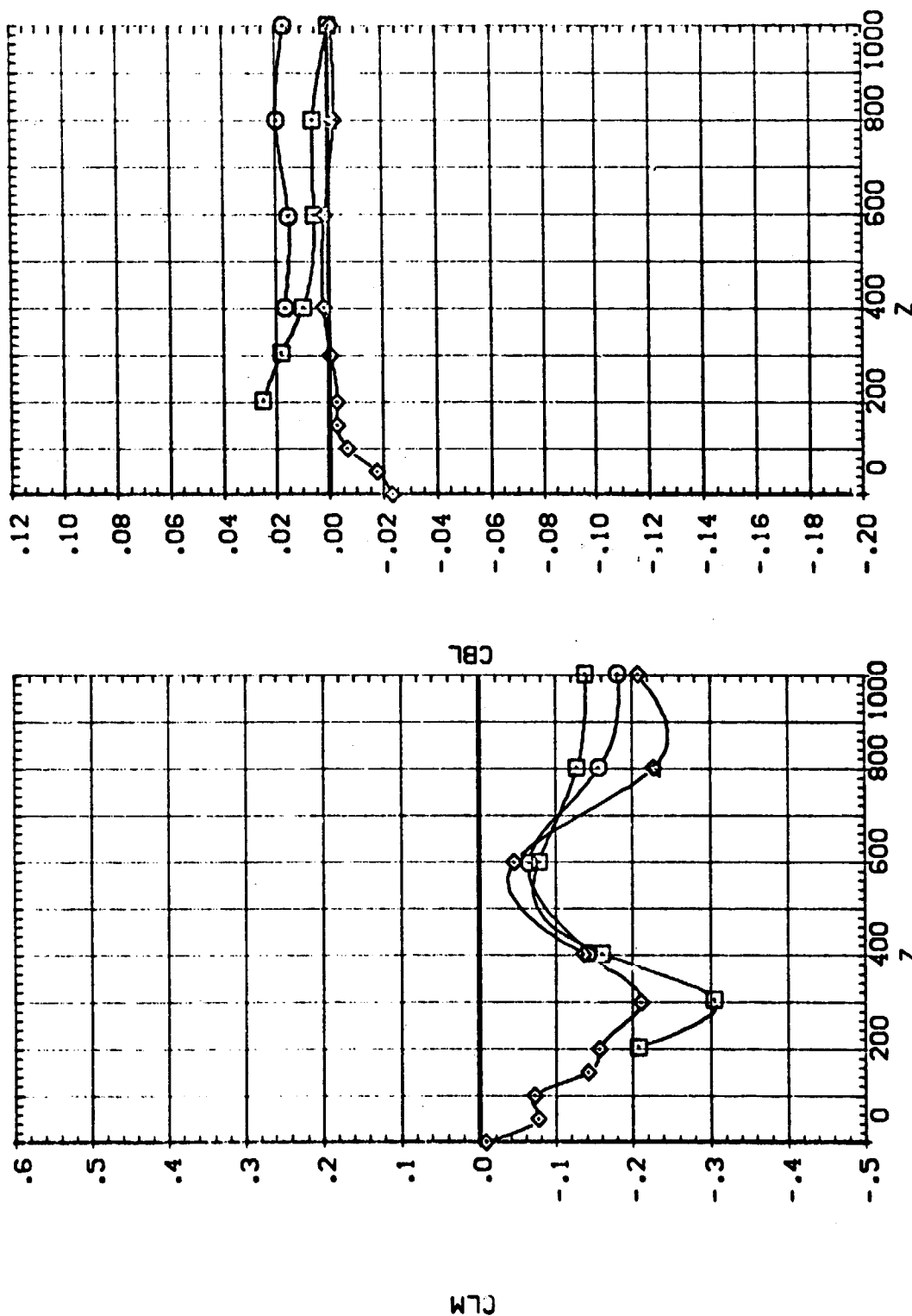


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ267)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|---------|----------|
| | | MACH | PTOTL | BETA | PCH#8 |
| ○ | 2.012 | 4.510 | 28.900 | -5.000 | 1500.000 |
| □ | 199.930 | .000 | BETA | -10.000 | |
| ◇ | 399.770 | .000 | DBETA | | |
| △ | 801.270 | X | | | |

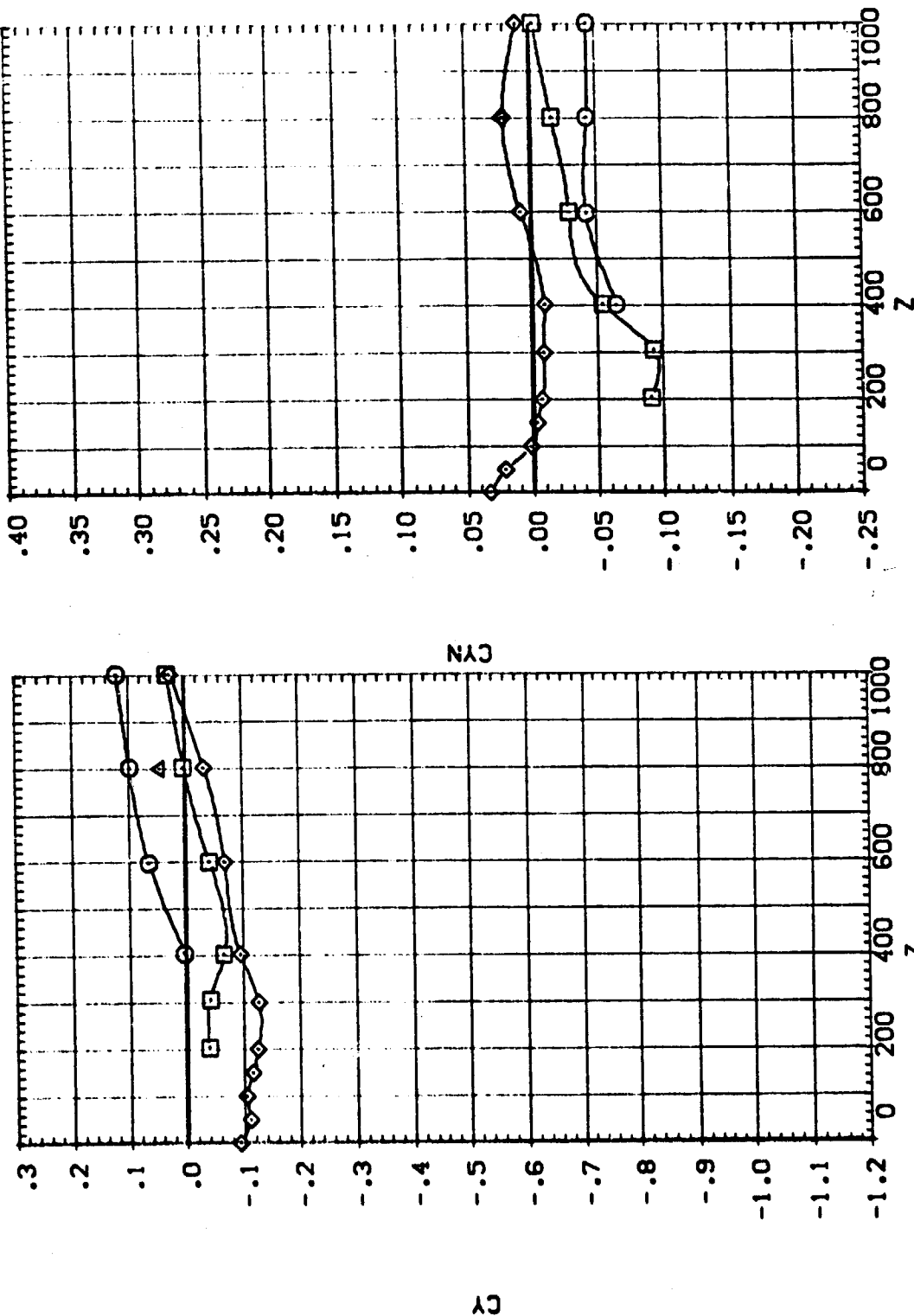


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ267)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | 2.012 | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|------|-------------------|----------|--------|--|
| | | | | 4.510 | PTOTL | 28.900 | |
| ○ | 199.930 | ALPHA | .000 | BETA | -5.000 | | |
| ◇ | 399.770 | DALPHA | .000 | DBETA | -10.000 | | |
| △ | 801.270 | X | .000 | PCMB | 1500.000 | | |

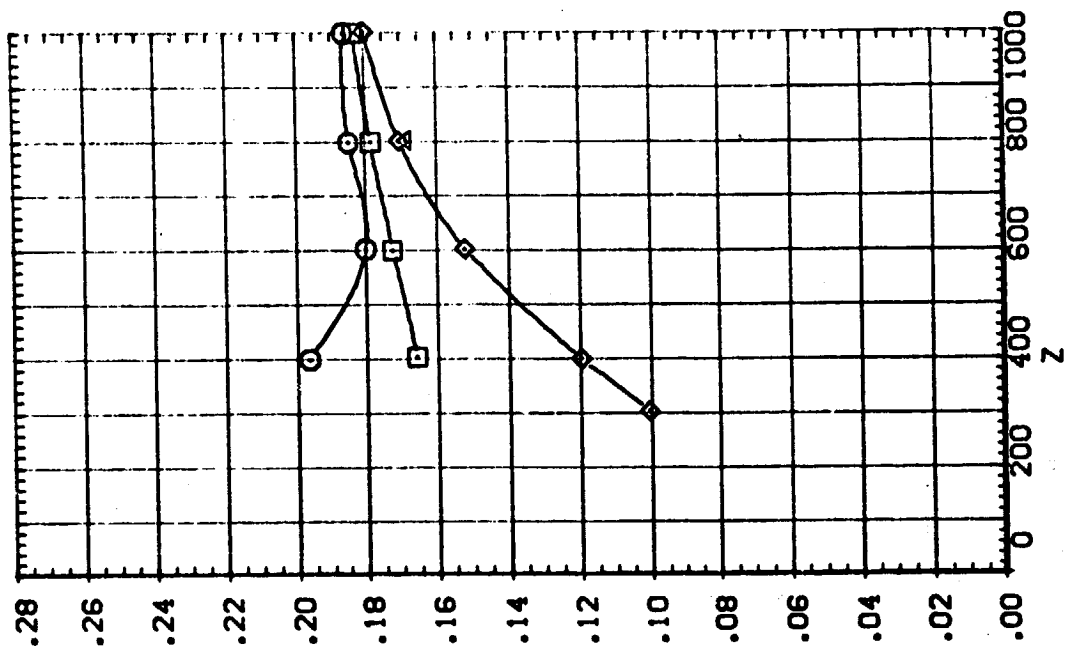
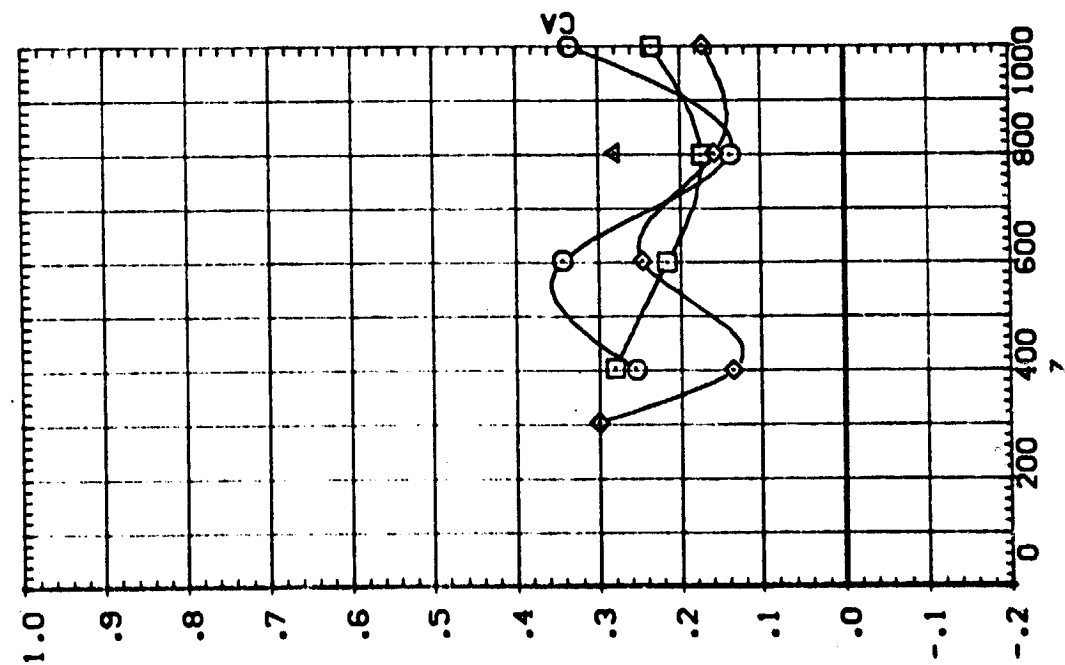


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ268)

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | .529 | ALPHA | PTOTL 28.900 |
| □ | 199.950 | BETA | -5.000 |
| ◇ | 461.250 | DBETA | -20.000 |
| △ | 800.640 | X | PC-HB 1500.000 |

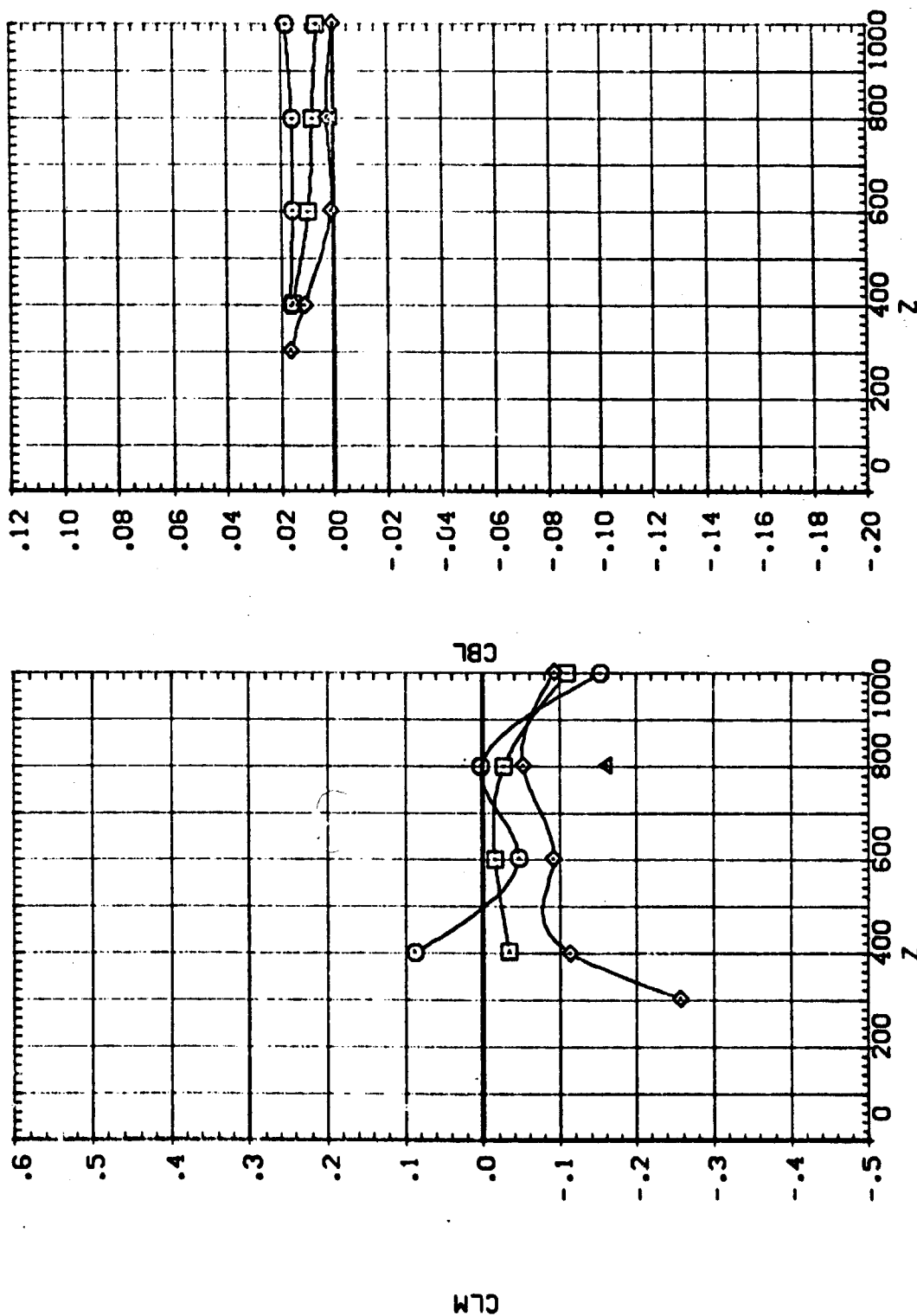
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ268)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | .529 | 4.510 | PIOTL 28.900 |
| □ | 199.960 | .000 | BETA -5.000 |
| ◇ | 401.250 | .000 | DBETA -20.000 |
| △ | 800.640 | .000 | PC#8 1500.000 |

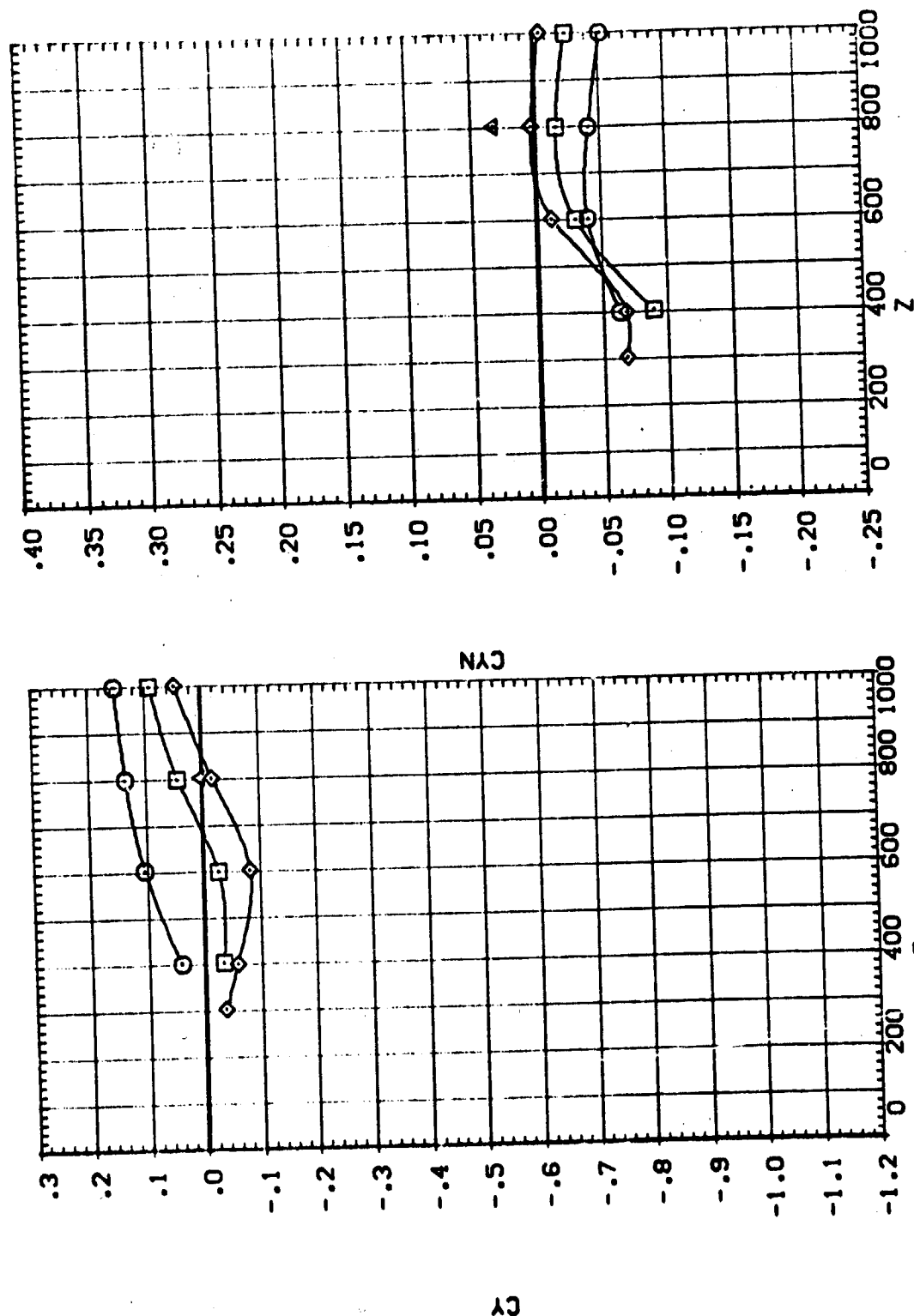


EFFECT OF SRB W/PLUMES SEPARATION ON 08B/ET AERODYNAMIC CHARACTERISTICS

JA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ268)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | .528 | ALPHA | PTOTL 28.900 |
| □ | 199.960 | DALPHA | BETA -5.000 |
| ◇ | 401.250 | X | DBETA -20.000 |
| △ | 800.640 | | PC-HB 1500.000 |

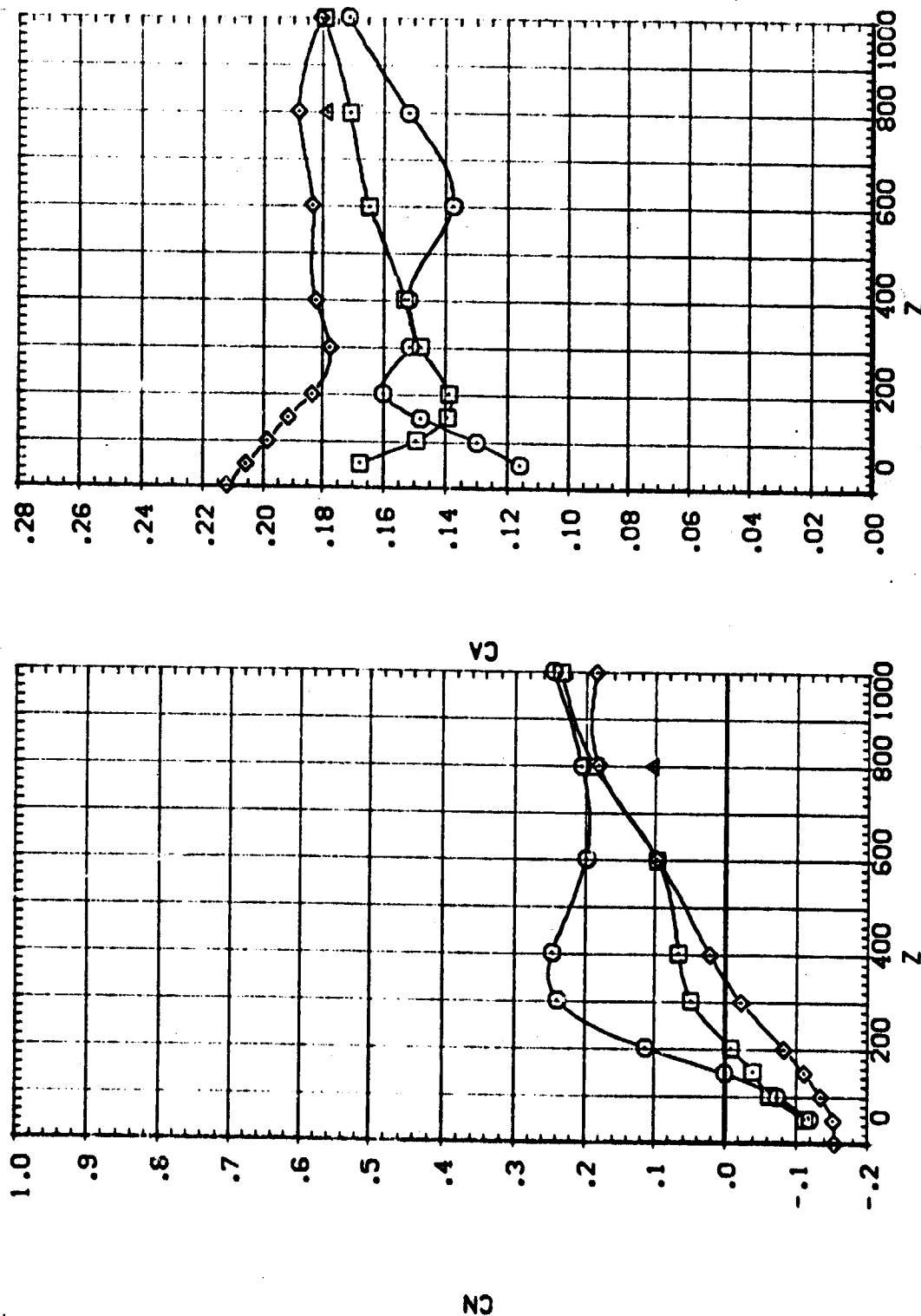


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ269)

SYMBOL Y

| PARAMETRIC VALUES | | | |
|-------------------|---------|--------|-------|
| | MACH | PITOTL | |
| ○ | .397 | 28.500 | |
| □ | 200.990 | .000 | BETA |
| ◇ | 399.720 | -5.000 | DBETA |
| △ | 800.640 | .000 | PC+8 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

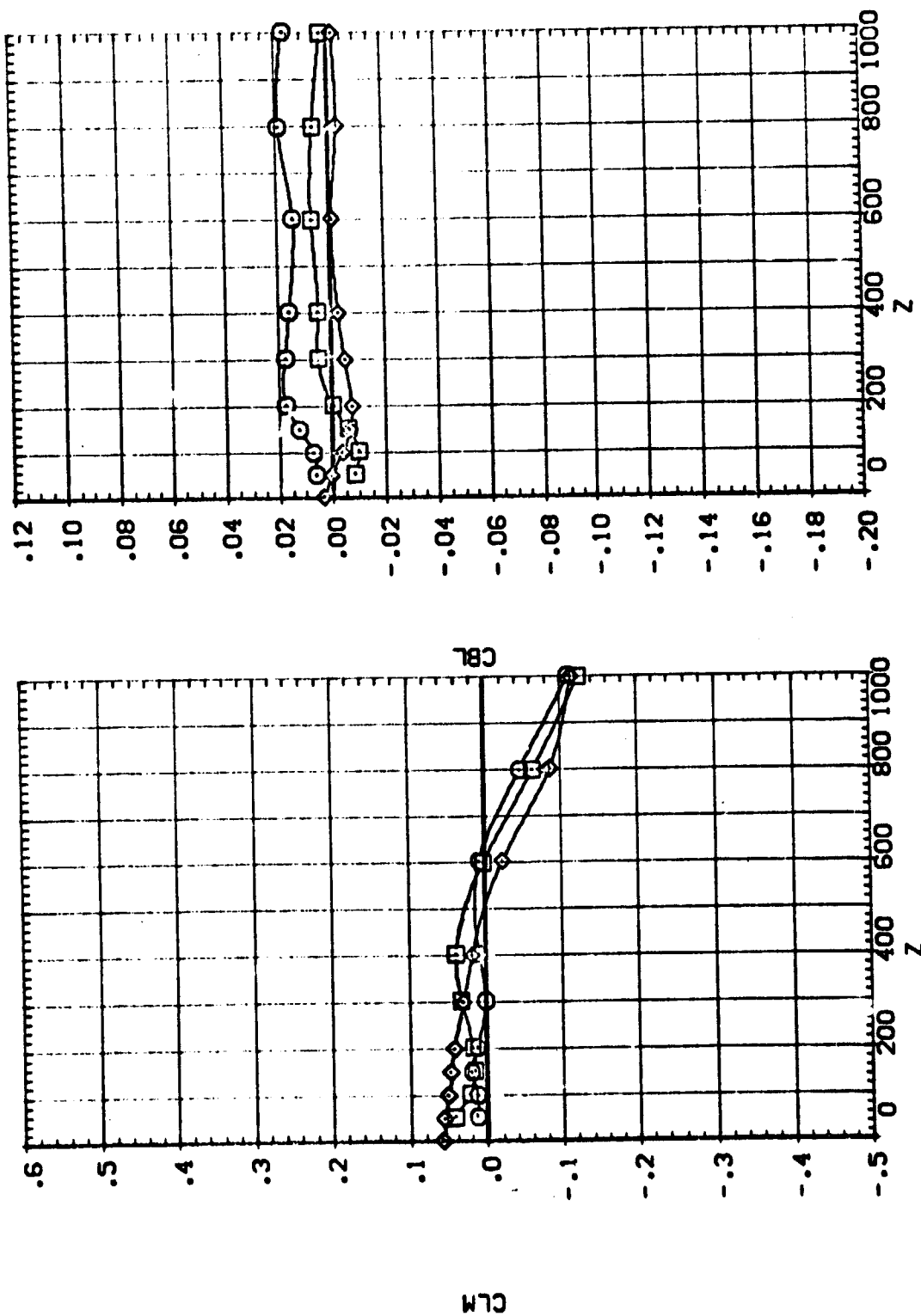


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ269)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | .397 | ALPHA | PIOTL 28.900 |
| □ | 200.990 | BETA | -5.000 |
| ◇ | 399.720 | DBETA | 5.000 |
| △ | 800.640 | X | PC+8 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ269)

SYMBOL

○ □ ◇ △

Y
200.990
399.720
800.640

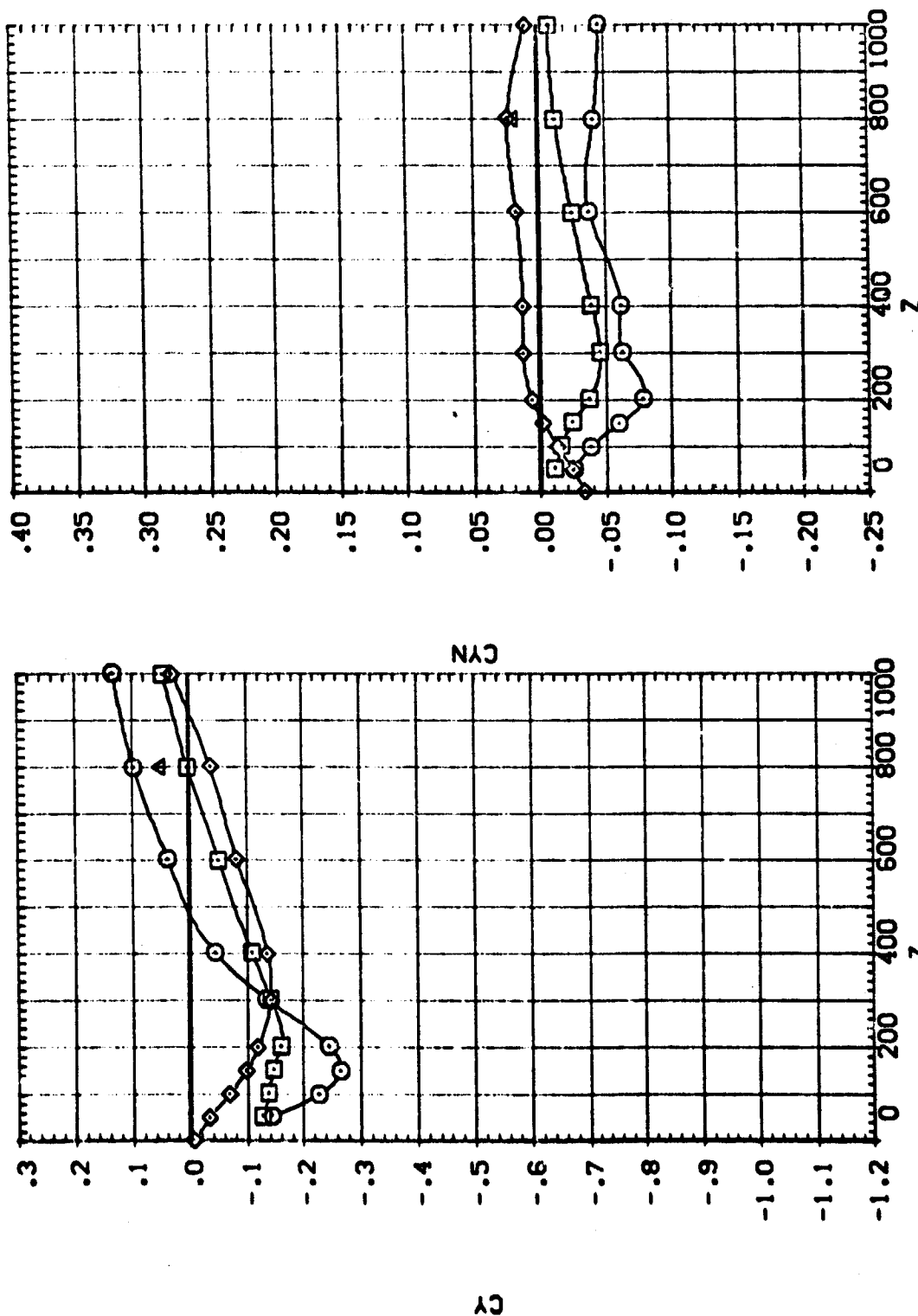
MACH
ALPHA
DALPHA
X

PARAMETRIC VALUES
4.510
.000
-5.000
.000

PTOTL
BETA
DBETA
PC+PB

28.900
-5.000
5.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

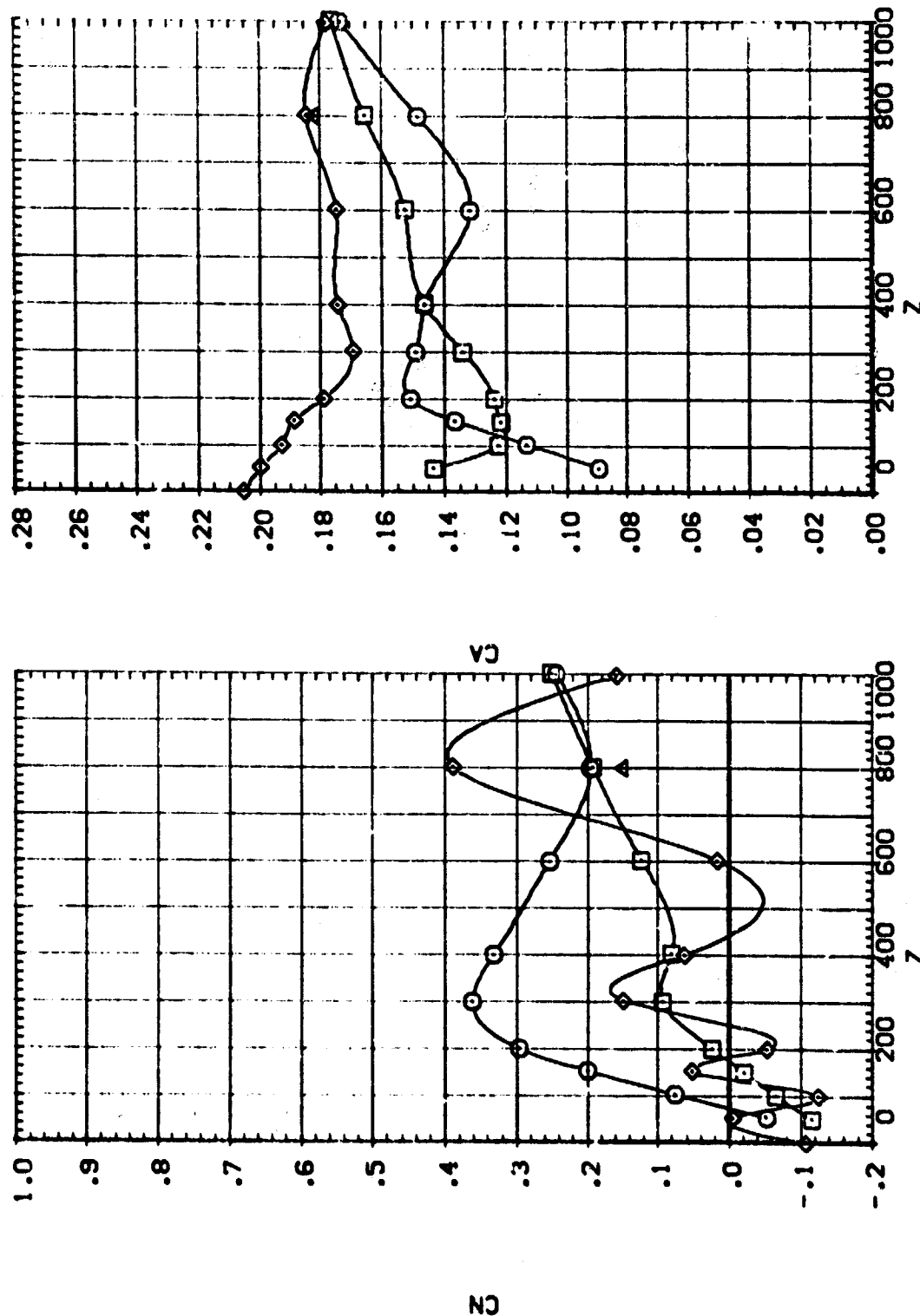


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09110 (RTJ270)

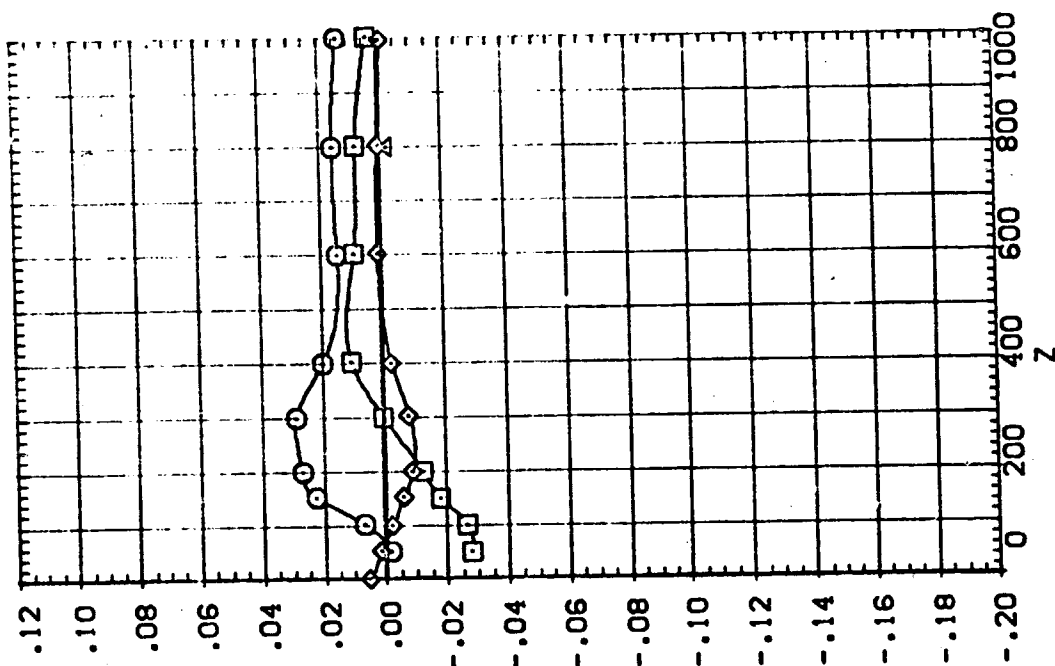
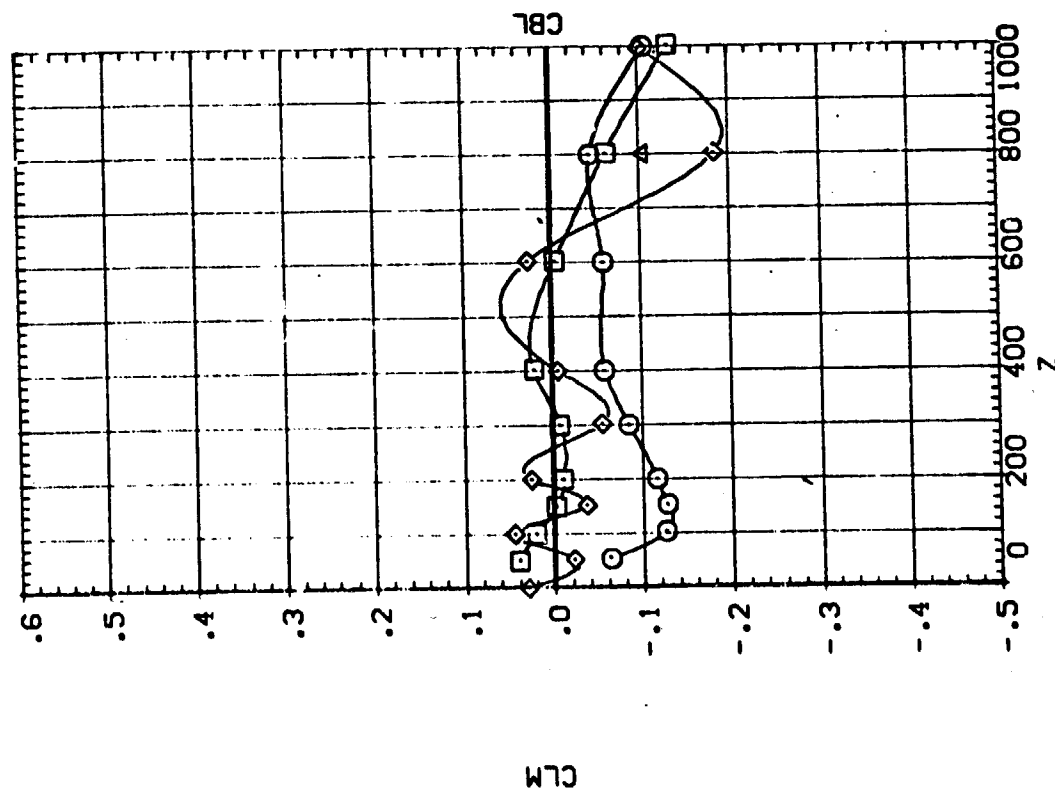
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES |
|--------|---------|-------------------|
| ○ | .906 | MACH |
| □ | 200.050 | ALPHA |
| ◇ | 400.040 | DALPHA |
| △ | 800.160 | X |
| | | PC+PB |
| | | 28.900 |
| | | -5.000 |
| | | .000 |
| | | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ270)

SYMBOL Y PARAMETRIC VALUES
 O .906 MACH 28.900
 200.050 ALPHA -5.00
 400.040 DBETA .000
 800.160 PC+8 1500.000



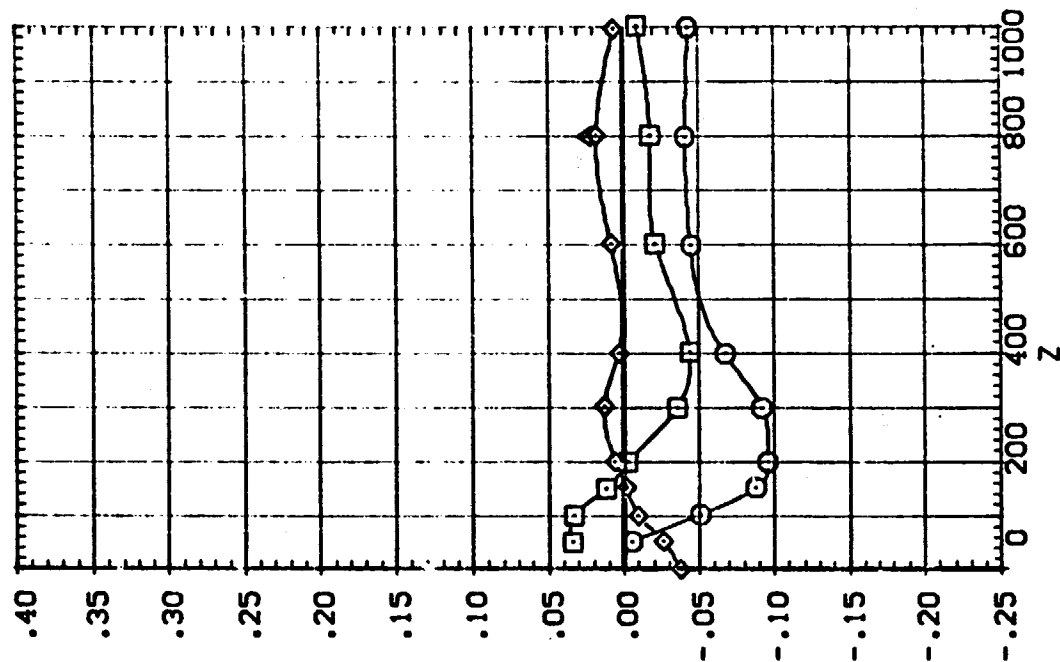
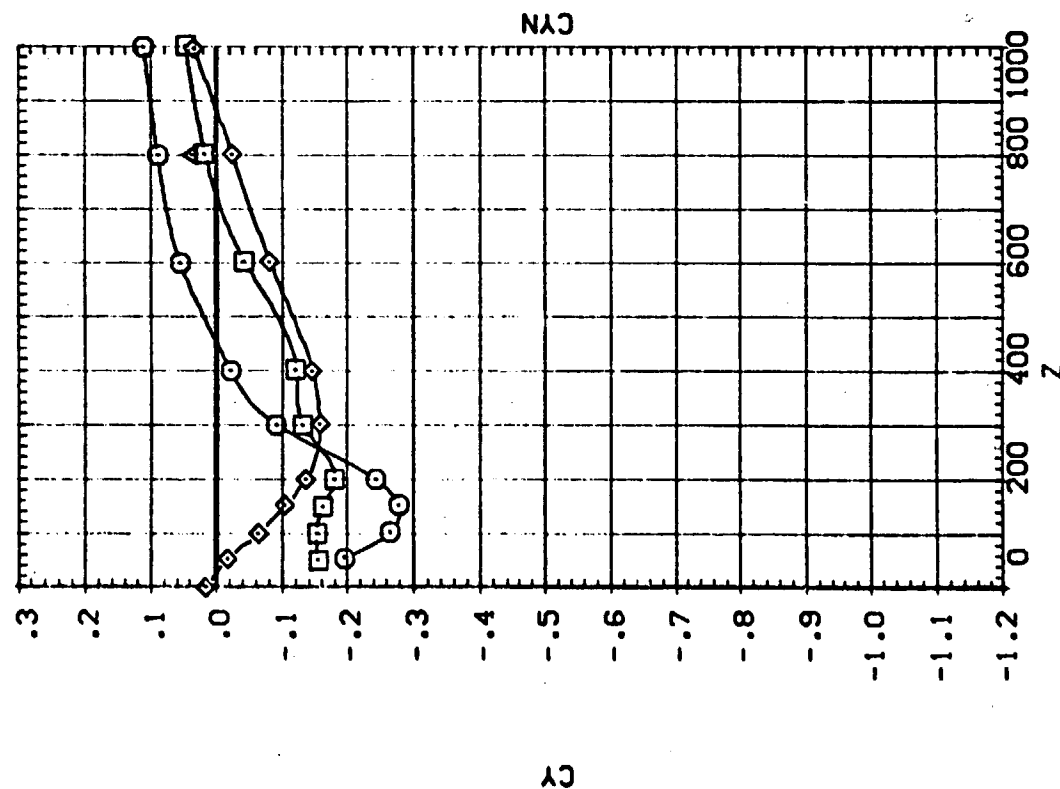
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS, OR
 INDIVIDUAL DATASETS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ270)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

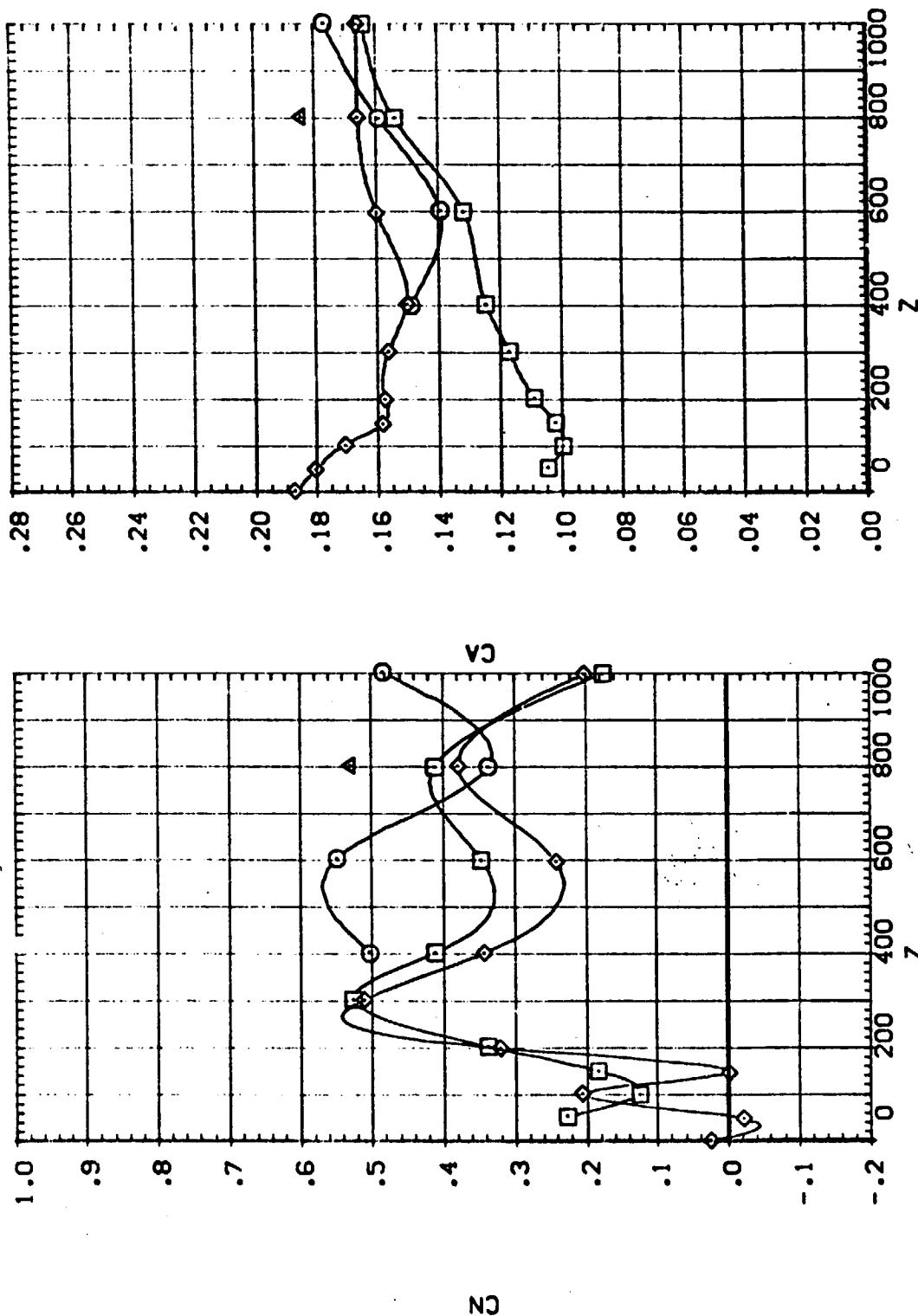
| SYMBOL | Y | MACH | PARAMETRIC VALUES | |
|--------|---------|--------|-------------------|----------|
| ○ | 200.050 | 4.510 | POTL | 28.900 |
| □ | 400.040 | .000 | BETA | -5.000 |
| ◇ | 800.160 | -5.000 | DBETA | .000 |
| △ | | .000 | PC-98 | 1500.000 |



IA13-SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ271)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTL | 28.900 |
|--------|---------|--------|-------------------|-------|----------|
| ○ | -0.633 | ALPHA | 4.510 | BETA | -5.000 |
| □ | 199.350 | DALPHA | -5.000 | DBETA | -5.000 |
| ◇ | 399.170 | X | .000 | PC-HB | 1500.000 |
| △ | 799.960 | | | | |

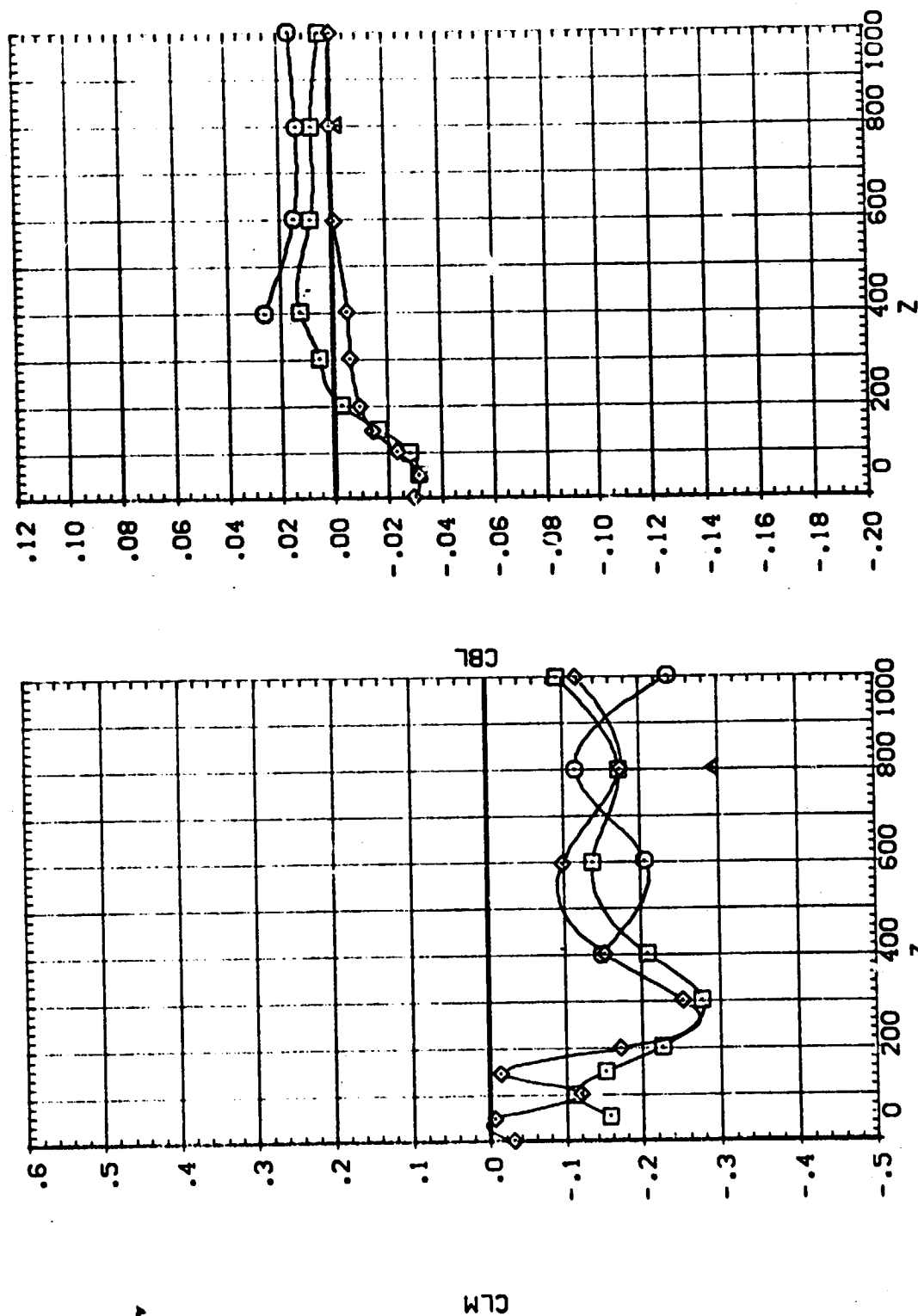


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ271)

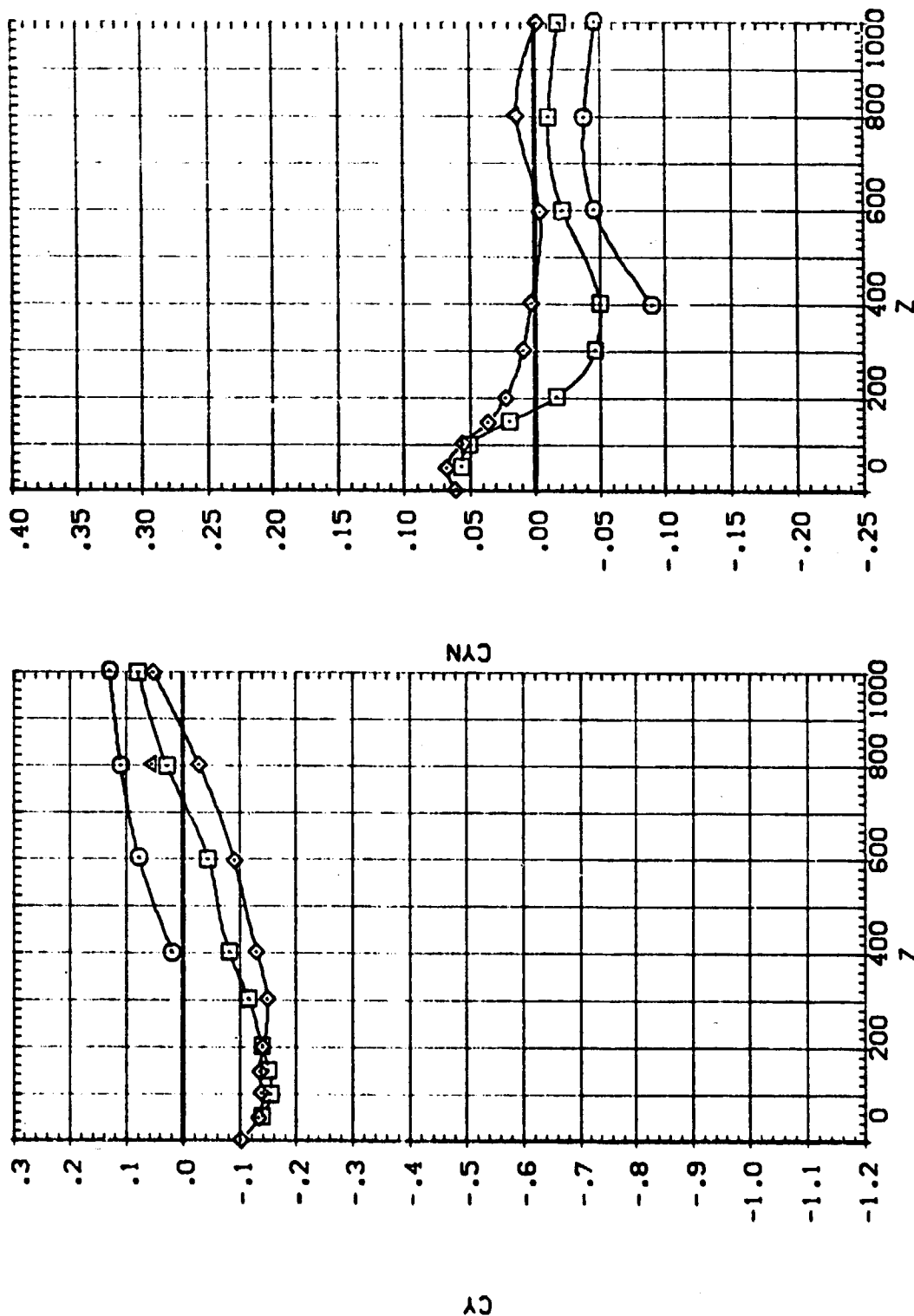
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| | | | | | |
|--------|---|-------------------|--------|-------|----------|
| SYMBOL | Y | PARAMETRIC VALUES | | | |
| | | MACH | 4.510 | P10TL | 28.900 |
| | | ALPHA | .000 | BETA | -5.000 |
| | | DALPHA | -5.000 | DBETA | -5.000 |
| | | X | .000 | PCMB | 1500.000 |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

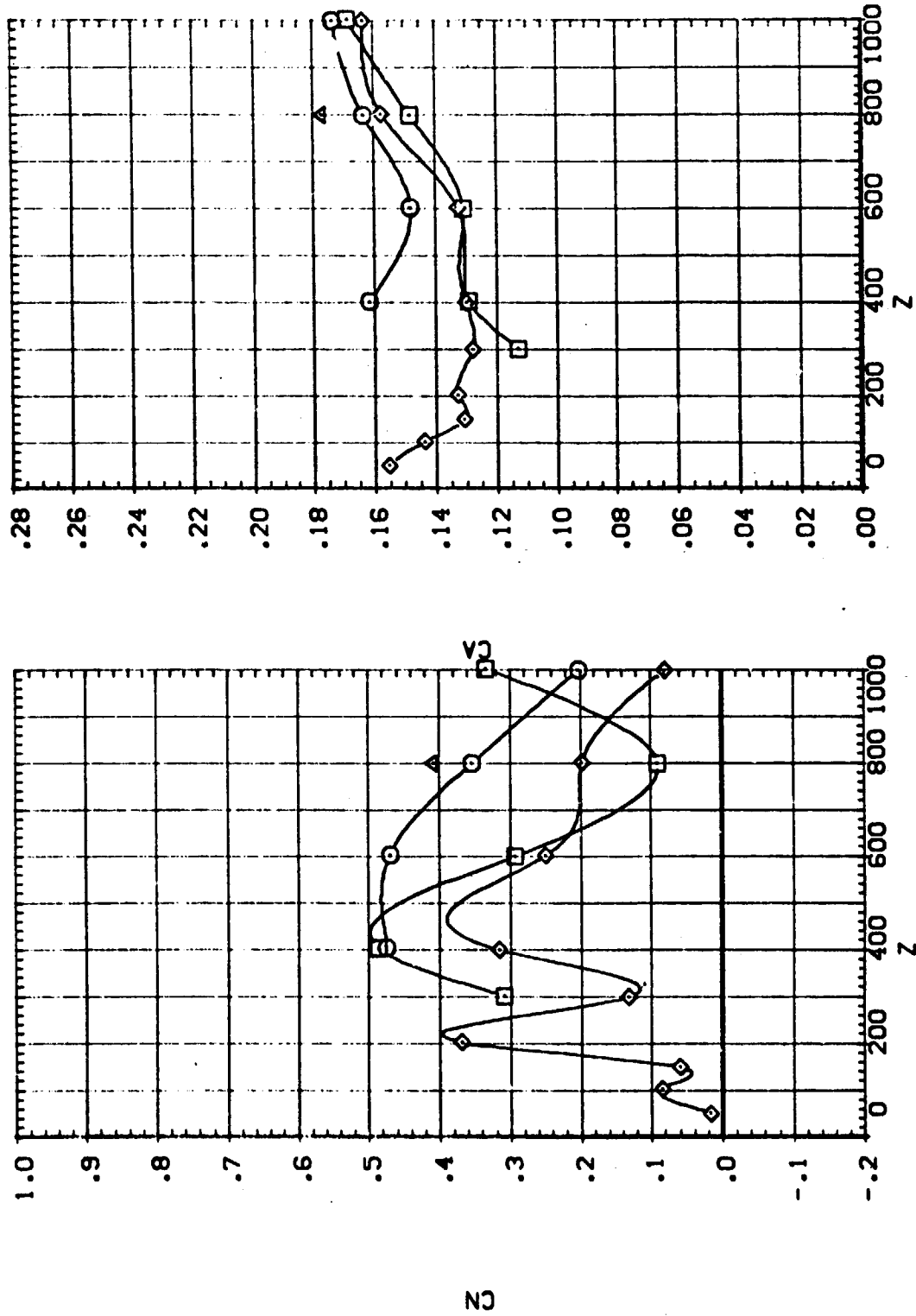
SYMBOL Y MACH 4.510 PTOTL 28.900
199.350 ALPHA .000 BETA -5.000
399.170 DALPHA -5.000 DBETA -5.000
799.650 X .000 PC-HB 1500.000



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ272)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

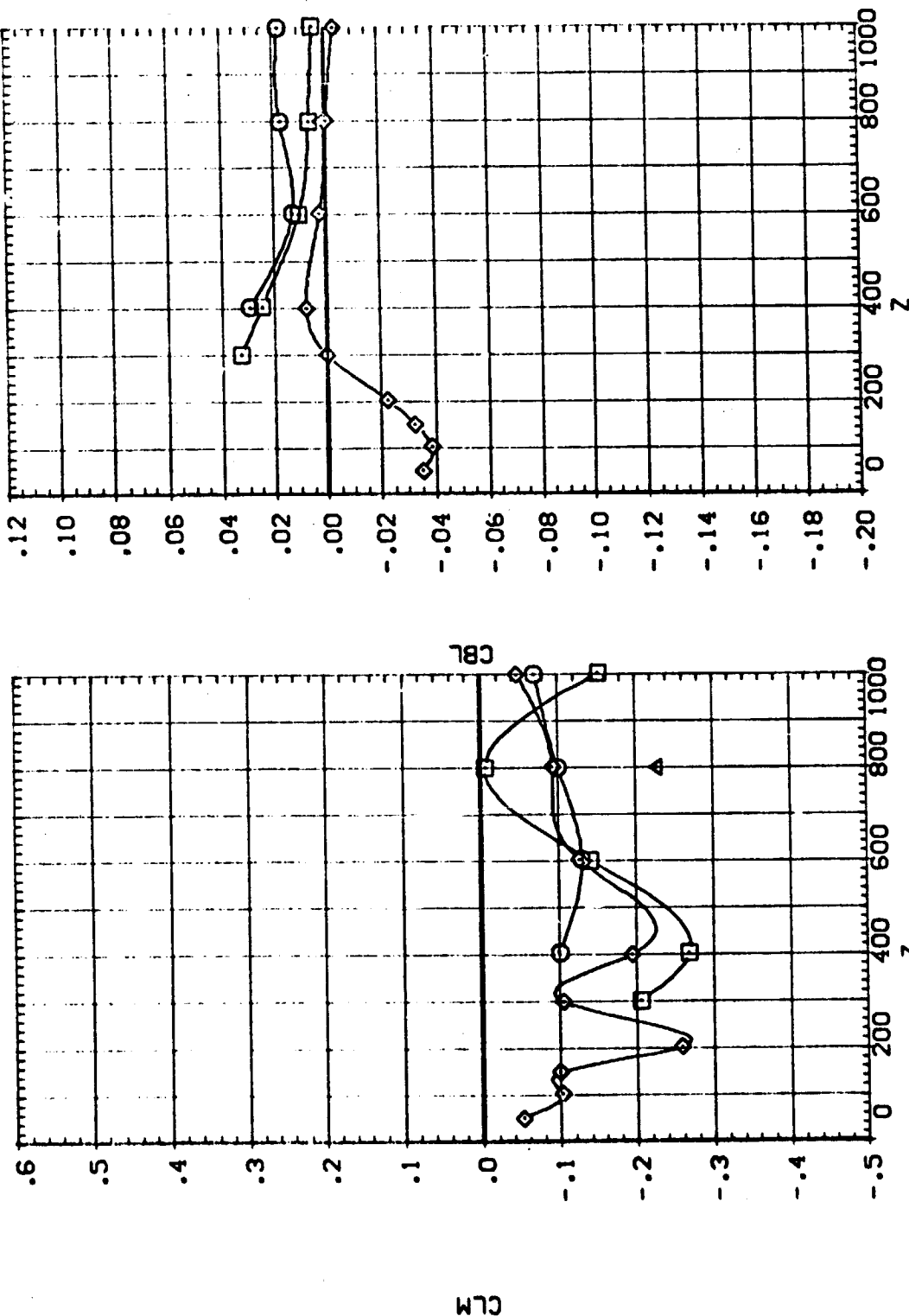
| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|-------|----------|--|
| | | MACH | 4.510 | P10TL | 28.900 | |
| ○ | 200.420 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 399.670 | DALPHA | -5.000 | DBETA | -10.000 | |
| △ | 800.680 | X | .000 | PC+PB | 1500.000 | |



1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ272)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|-------|----------|
| | | MACH | 4.510 | PICOL | 28.900 |
| ○ | 200.420 | ALPHA | .000 | BETA | -5.000 |
| □ | 399.670 | DALPHA | -5.000 | DBETA | -10.000 |
| ◇ | 800.680 | X | .000 | PC+9 | 1500.000 |

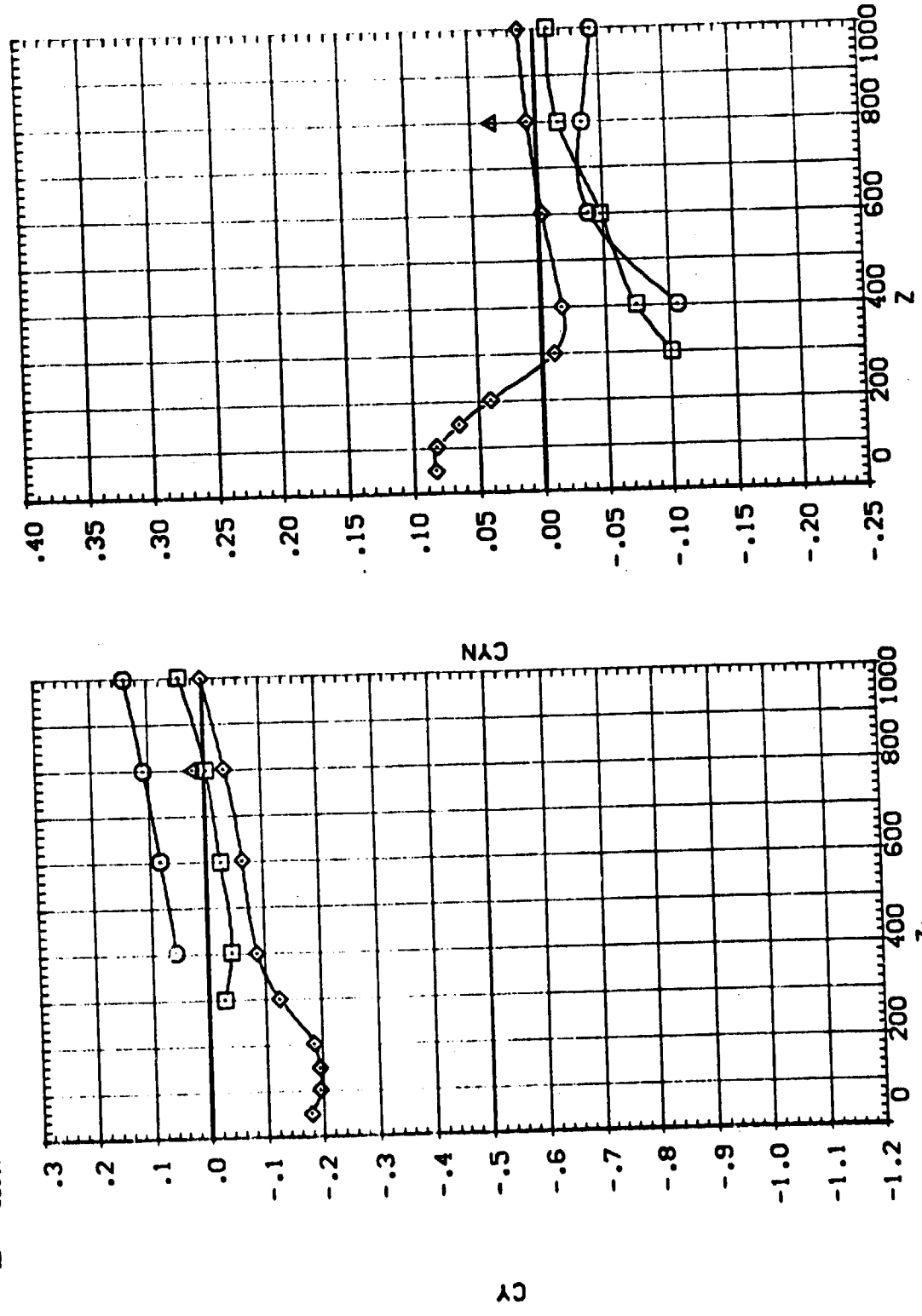


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RIJ272)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

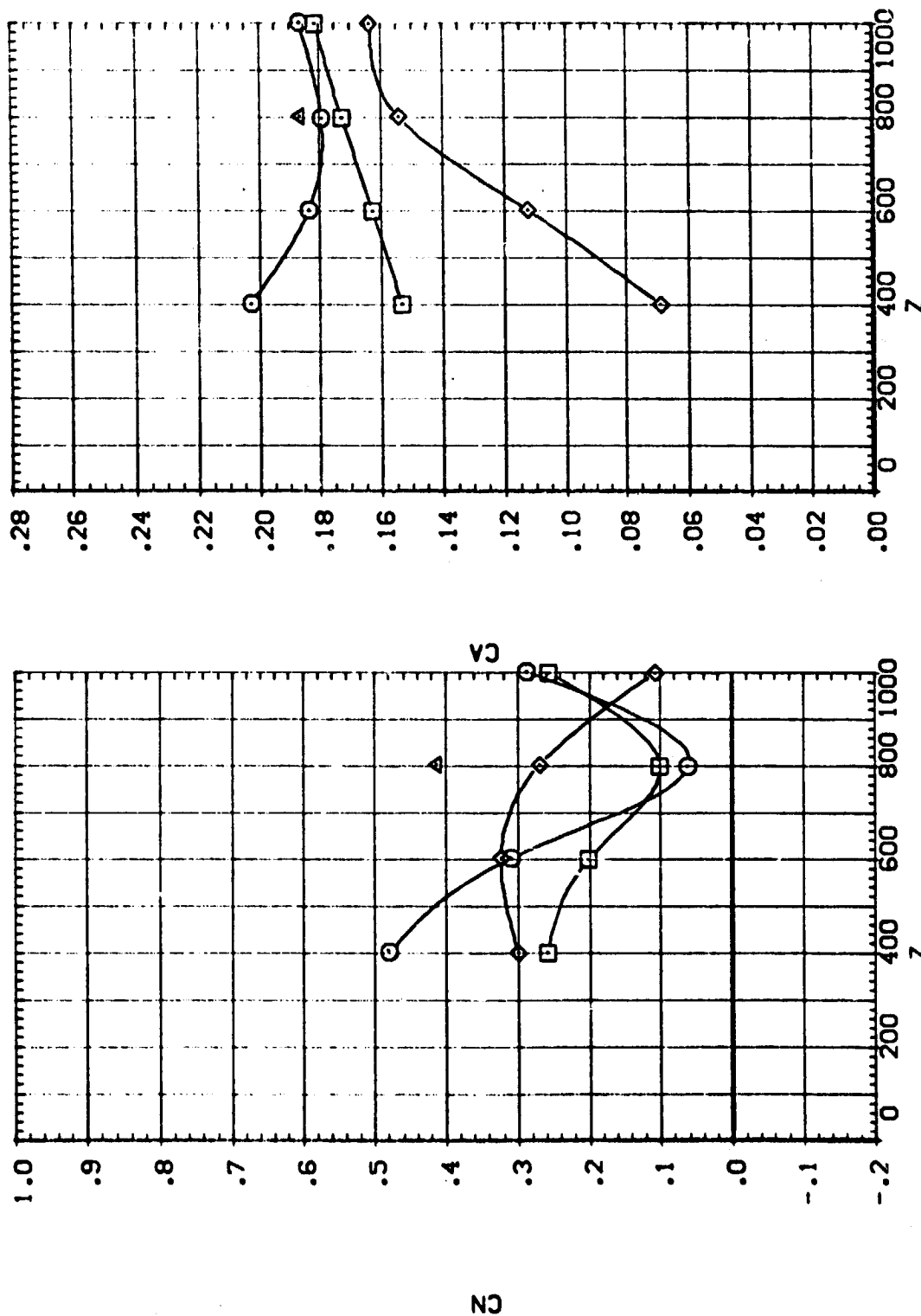
| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.420 | ALPHA | .000 | BETA | -5.000 | |
| □ | 399.670 | DALPHA | -5.000 | DBETA | -10.000 | |
| ◇ | 800.680 | X | .000 | PCH#B | 1500.000 | |



SYMBOL Y
 ○ -2.456
 □ 200.310
 ◇ 399.680
 △ 799.450

PARAMETRIC VALUES
 MACH 4.510
 PTOTL 28.900
 ALPHA .000
 BETA -5.000
 DBETA -20.000
 PC*PB .000
 X 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

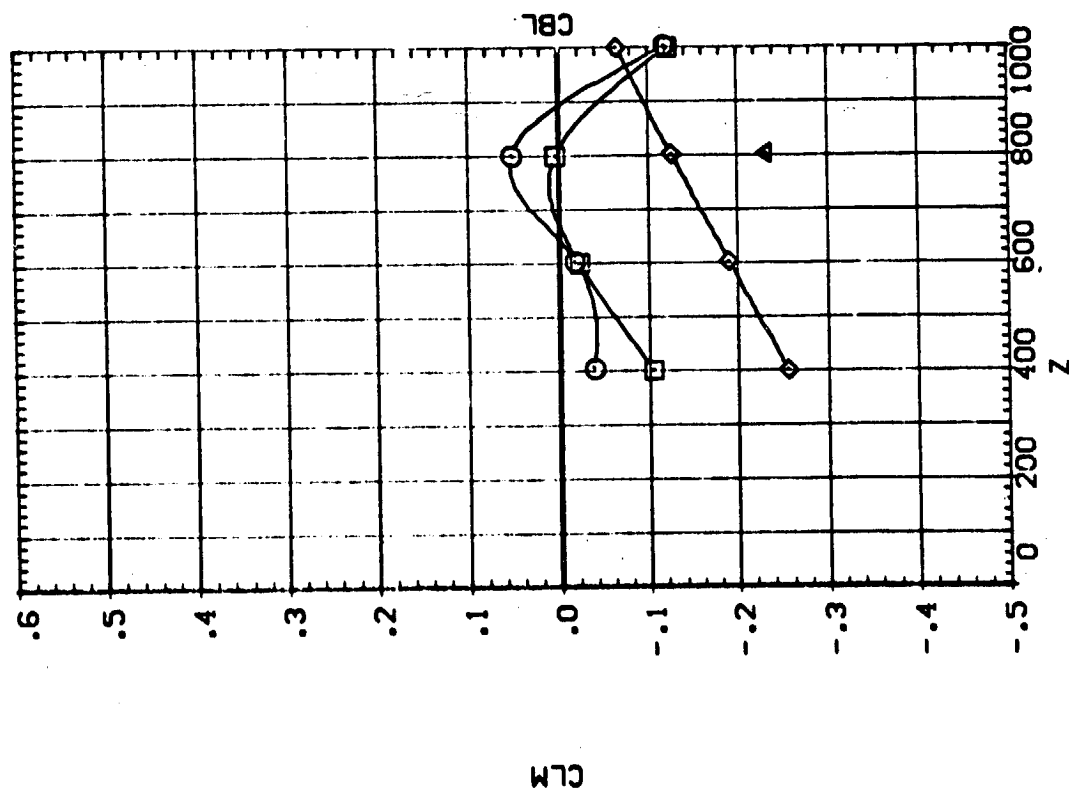
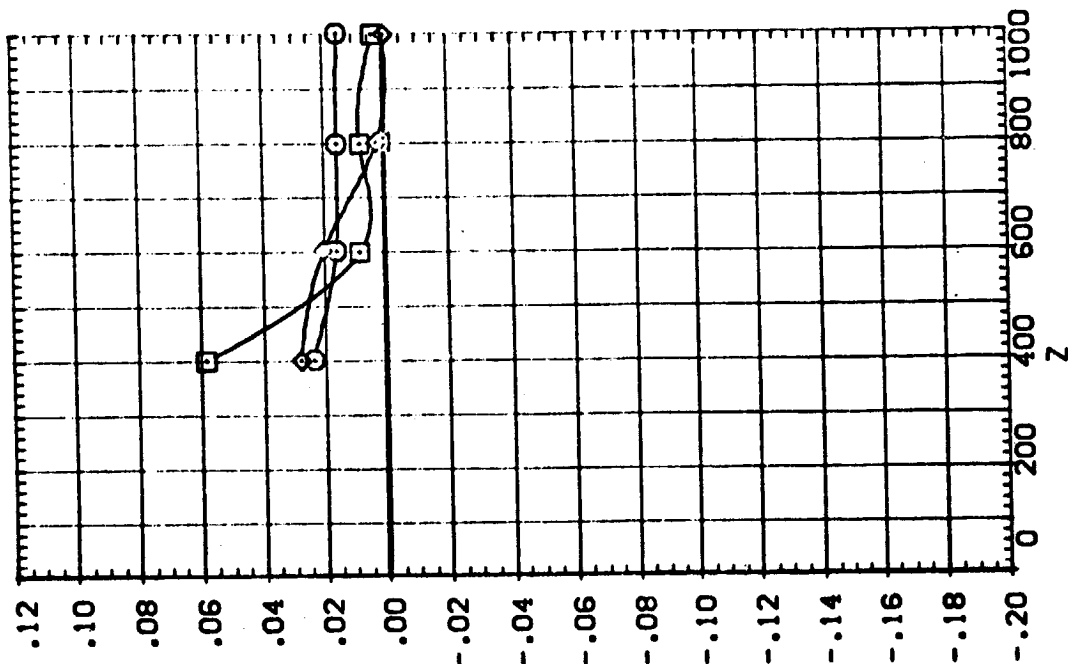


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ273)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | | |
|--------|---|-------------------|--------|--------|-------|----------|
| ○ | Y | -2.456 | MACH | 4.510 | PTOTL | 28.900 |
| □ | | 200.310 | ALPHA | .000 | BETA | -5.000 |
| ◇ | | 399.680 | DALPHA | -5.000 | DBETA | -20.000 |
| △ | | 799.450 | X | .000 | PC+PB | 1500.000 |



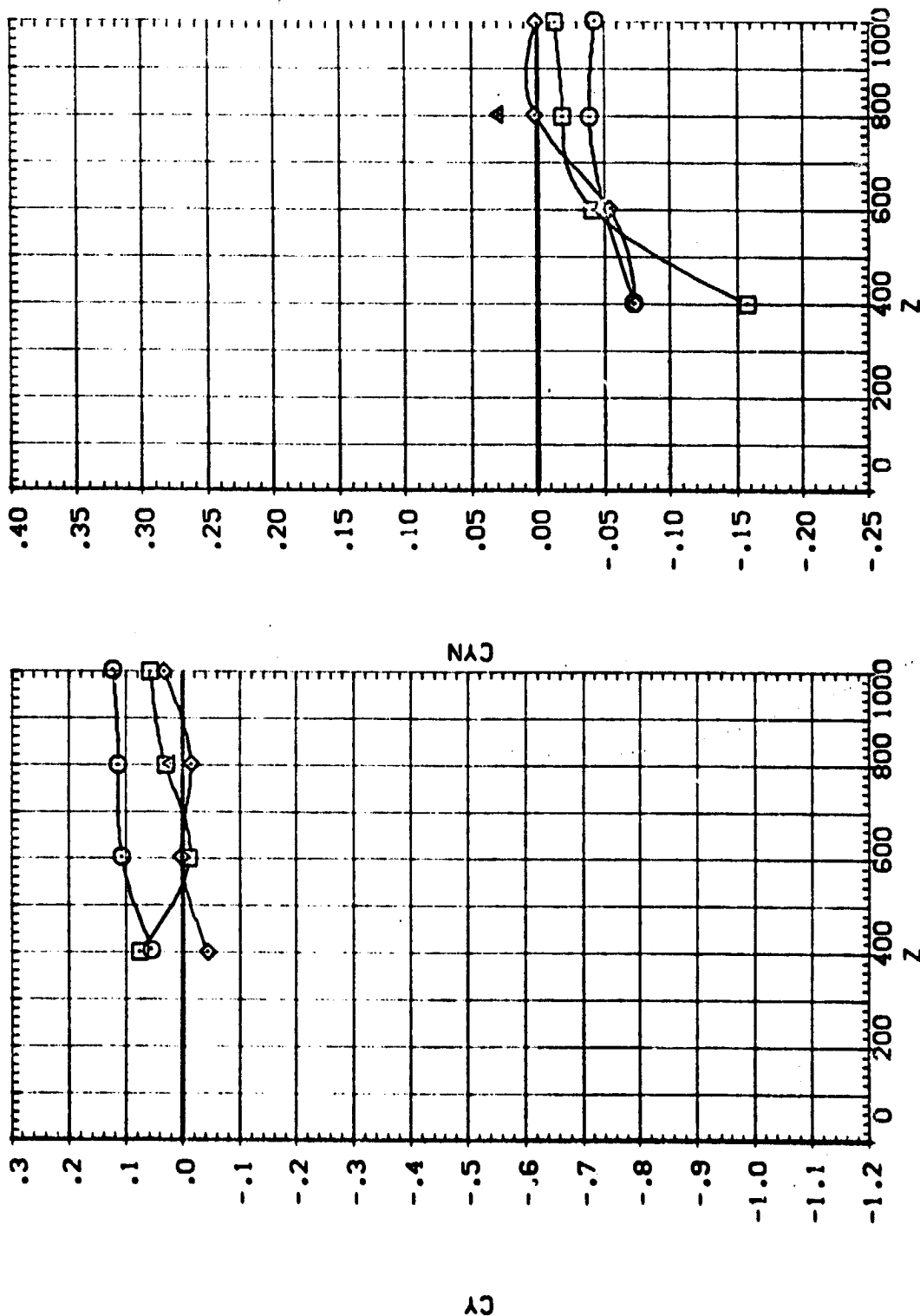
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ273)

SYMBOL

PARAMETRIC VALUES

| Y | MACH | PIOTL | 28.900 |
|---------|--------|-------|----------|
| -2.456 | 4.510 | PIOTL | -5.000 |
| 200.310 | .000 | BETA | -20.000 |
| 399.680 | -5.000 | DBETA | 1500.000 |
| 799.450 | .000 | PC#B | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

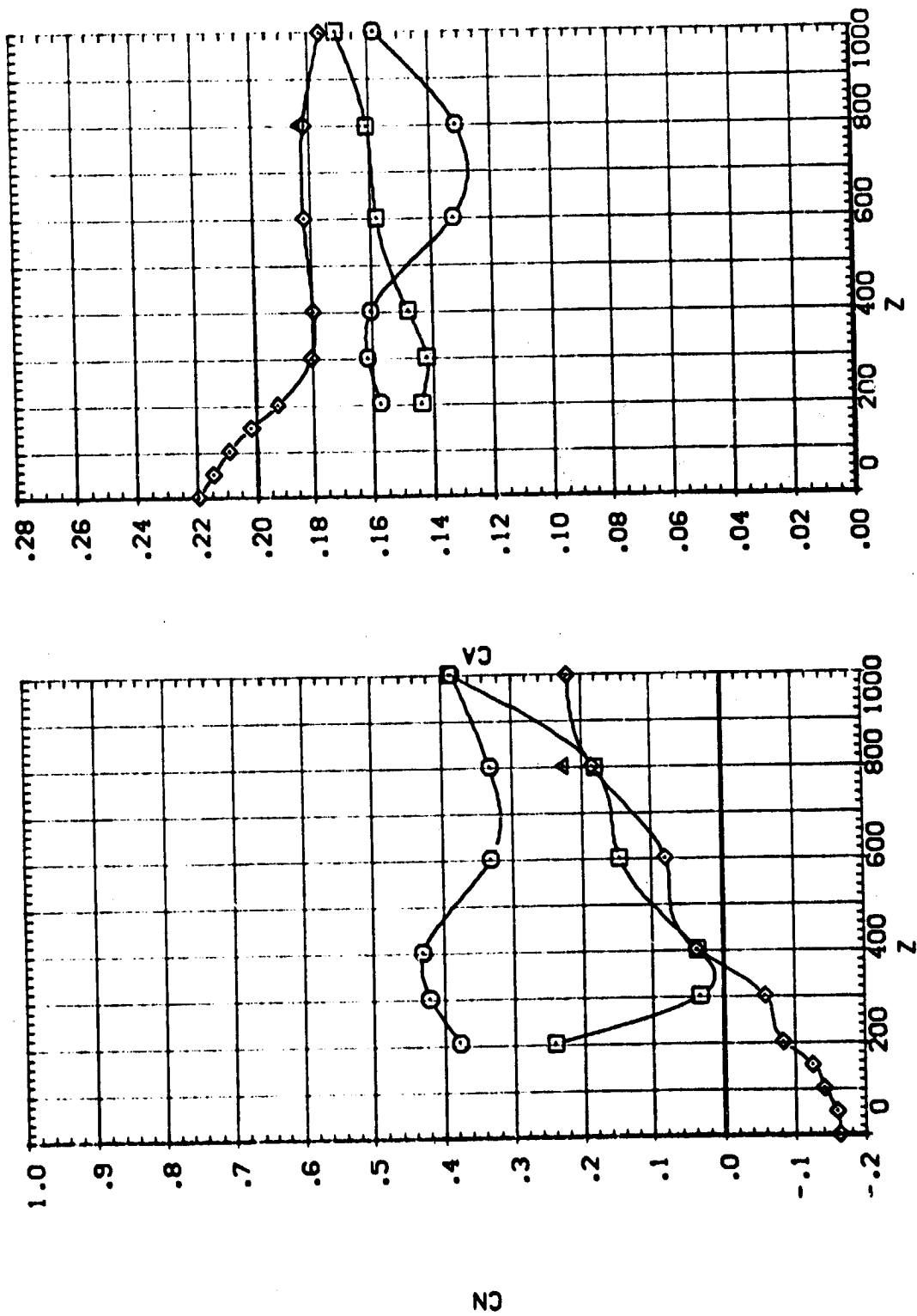


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ274)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | | |
|--------|---------|-------------------|---------|-------|--------|-------|----------|
| | | MACH | 4.510 | PTOTL | 28.900 | BETA | -5.000 |
| ○ | 200.610 | ALPHA | .000 | DBETA | 5.000 | PC+PB | 1500.000 |
| □ | 400.940 | DALPHA | -10.000 | | | | |
| ◇ | 800.680 | X | .000 | | | | |
| △ | | | | | | | |



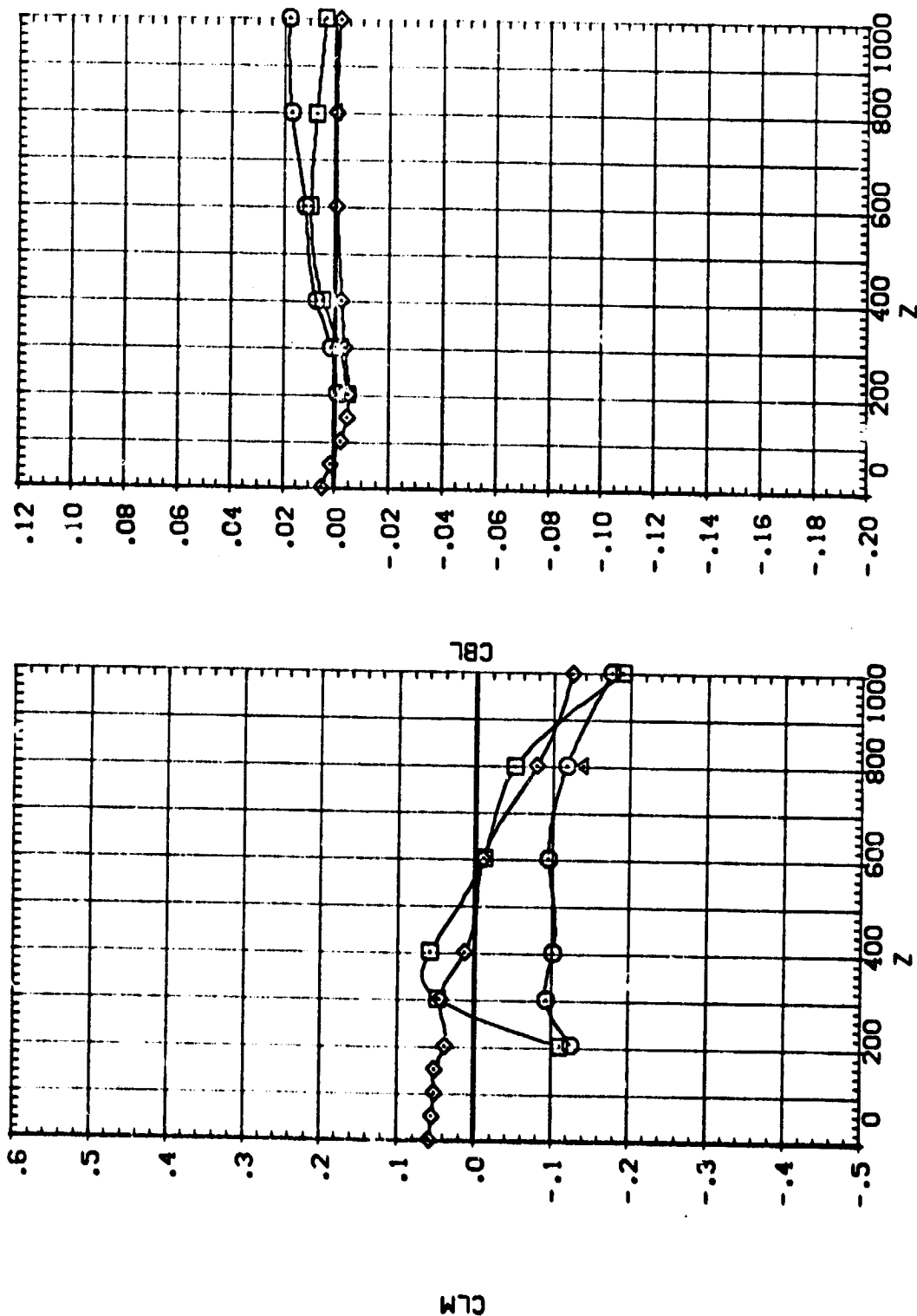
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ274)

SYMBOL

PARAMETRIC VALUES

| | | | | | |
|---------|--------|---------|-------|----------|--------|
| Y | .642 | MACH | 4.510 | PTOTL | 28.900 |
| 200.610 | ALPHA | .000 | BETA | -5.000 | |
| 403.940 | DALPHA | -10.000 | DBETA | 5.000 | |
| 800.680 | X | .000 | PCPB | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



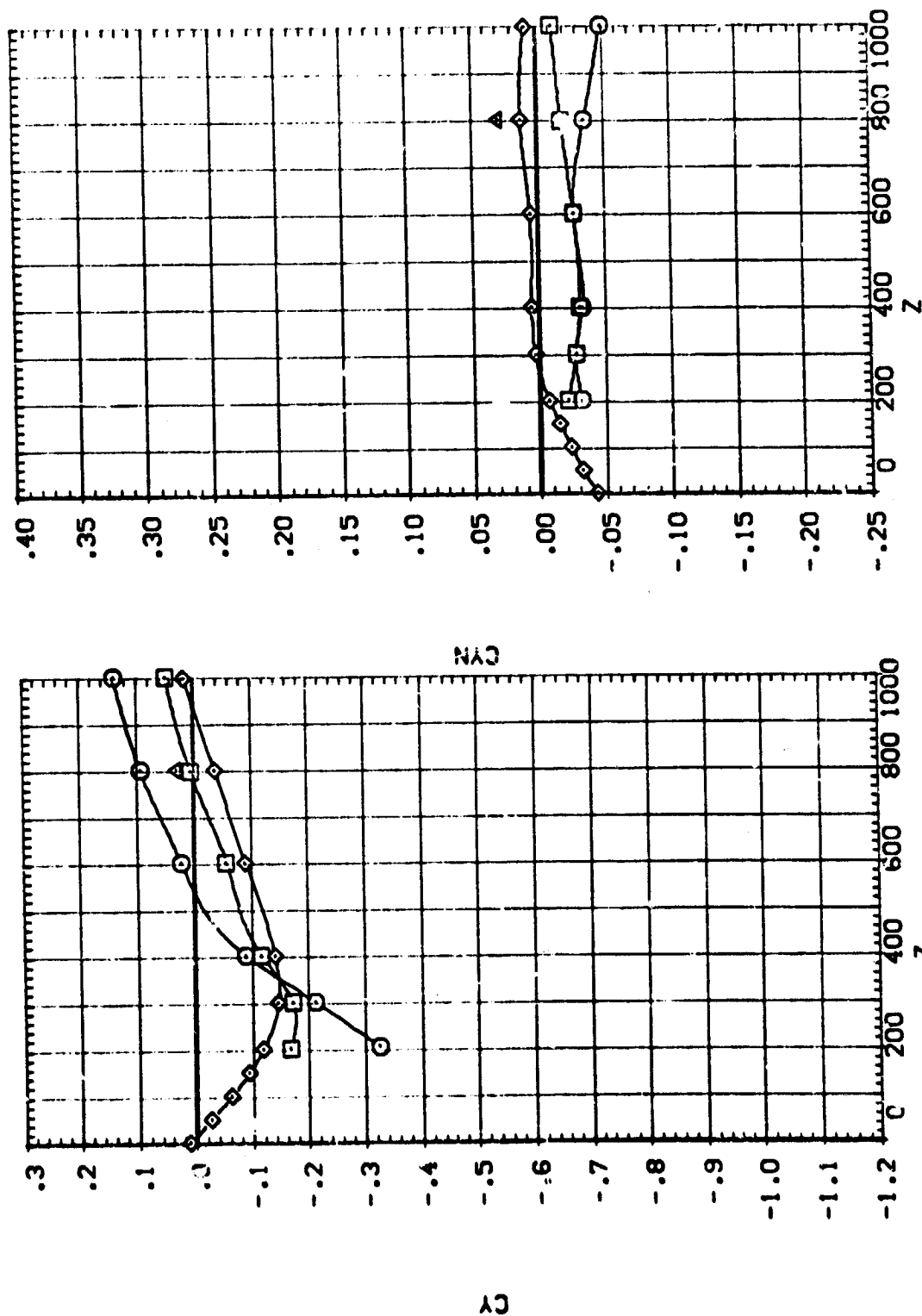
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RIJ274)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | .642 |
| MACH | 4.510 |
| PIOTL | 28.900 |
| ALPHA | .000 |
| BETA | -5.000 |
| DBETA | 5.000 |
| PC+PB | 1500.000 |
| X | .000 |

SYMBOL
 ○
 □
 ◇
 △



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T1C (RTJ275)

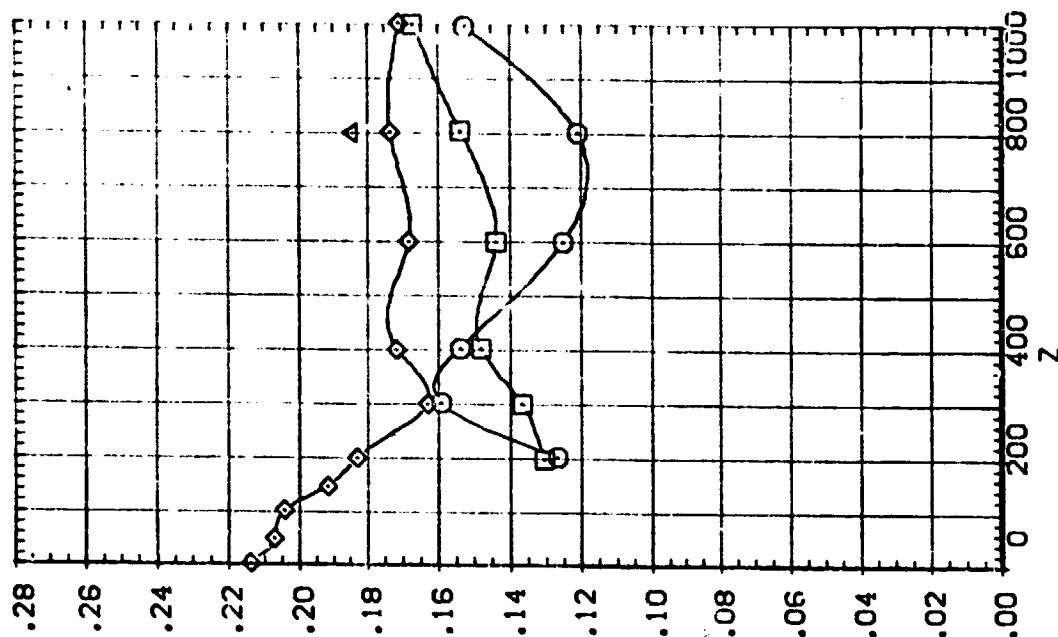
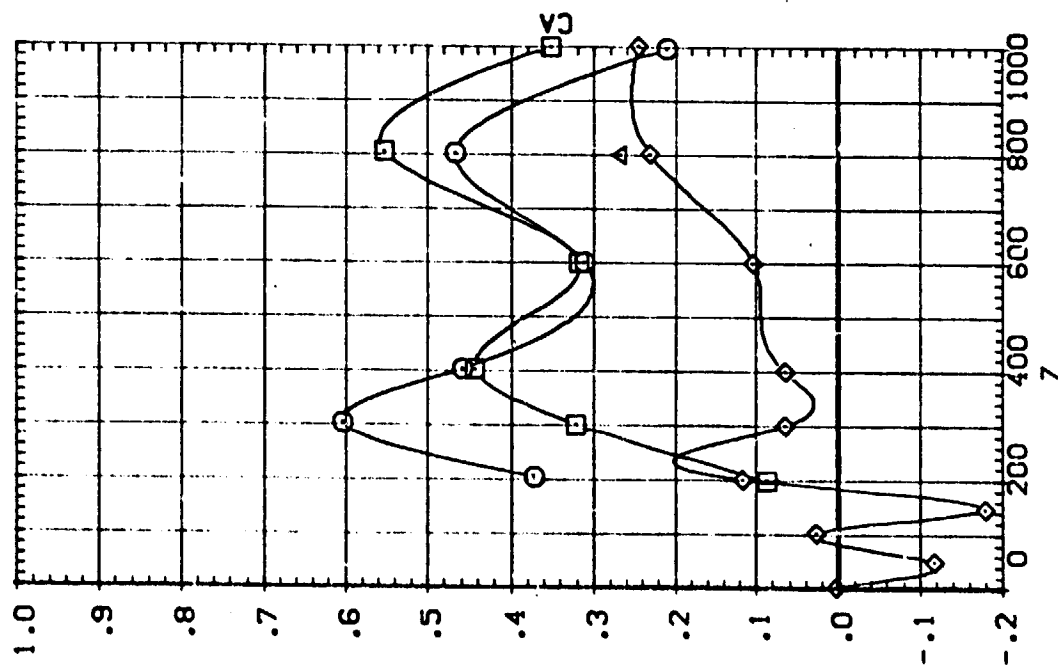
SYMBOL

Y .414
200.11C
399.64U
799.980

PARAMETRIC VALUES

| | | | | |
|----------|--------|---------|-------|----------|
| .414 | MACH | 4.510 | PTOTL | 28,900 |
| .200.11C | ALPHA | .000 | BETA | -5,000 |
| .399.64U | DALPHA | -10.000 | BETA | .000 |
| .799.980 | X | .000 | PC+8 | 1500.303 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



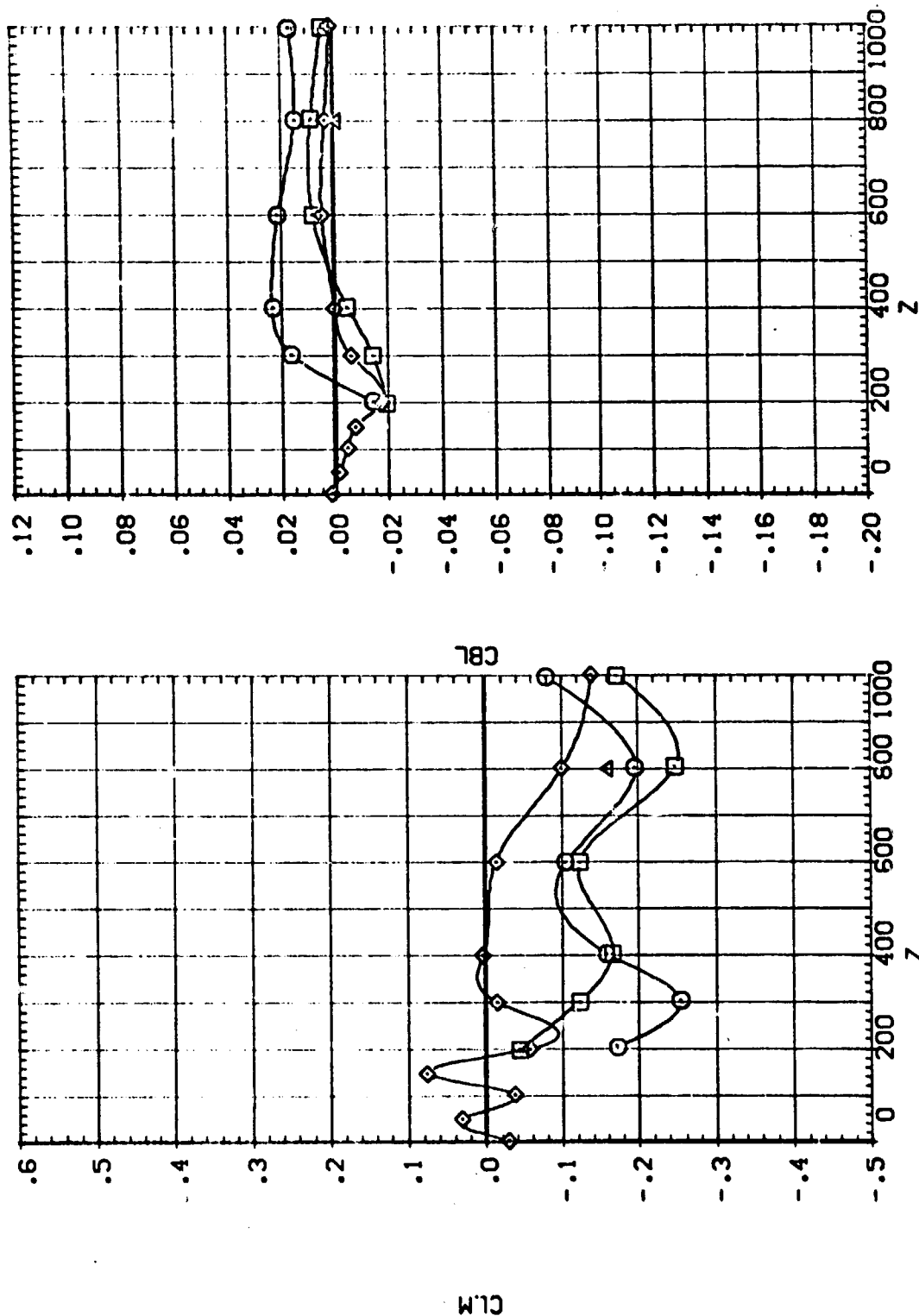
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

PAGE 1302

LA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ275)

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.110 | ALPHA | .000 | BETA | -5.000 | |
| □ | 399.640 | DALPHA | -10.000 | DZETA | .000 | |
| ◇ | 799.980 | X | .000 | PC*#8 | 1500.000 | |

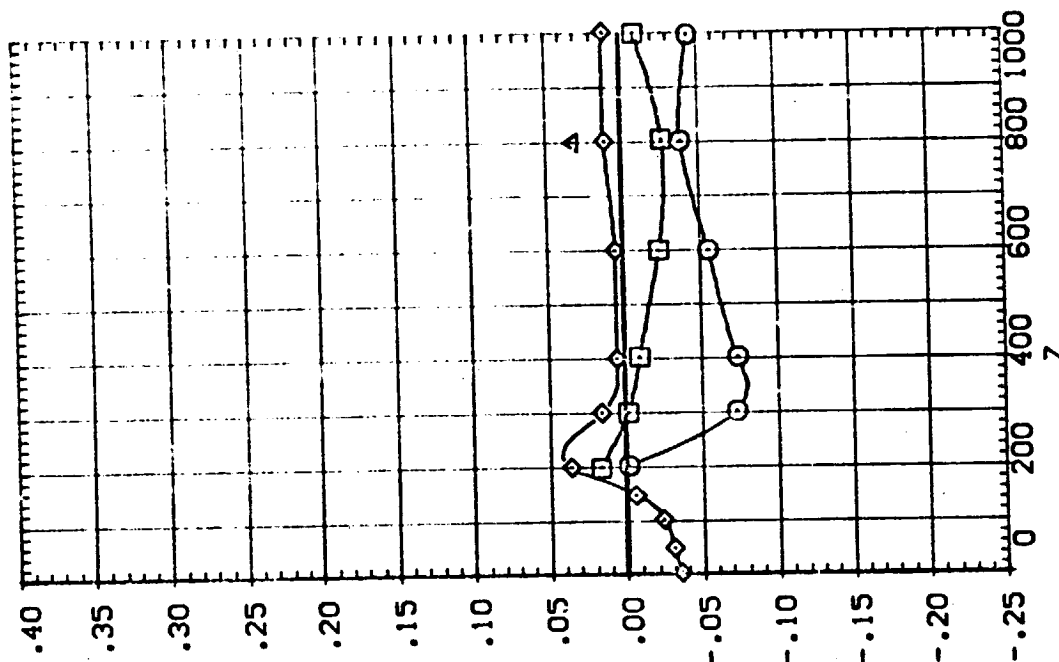
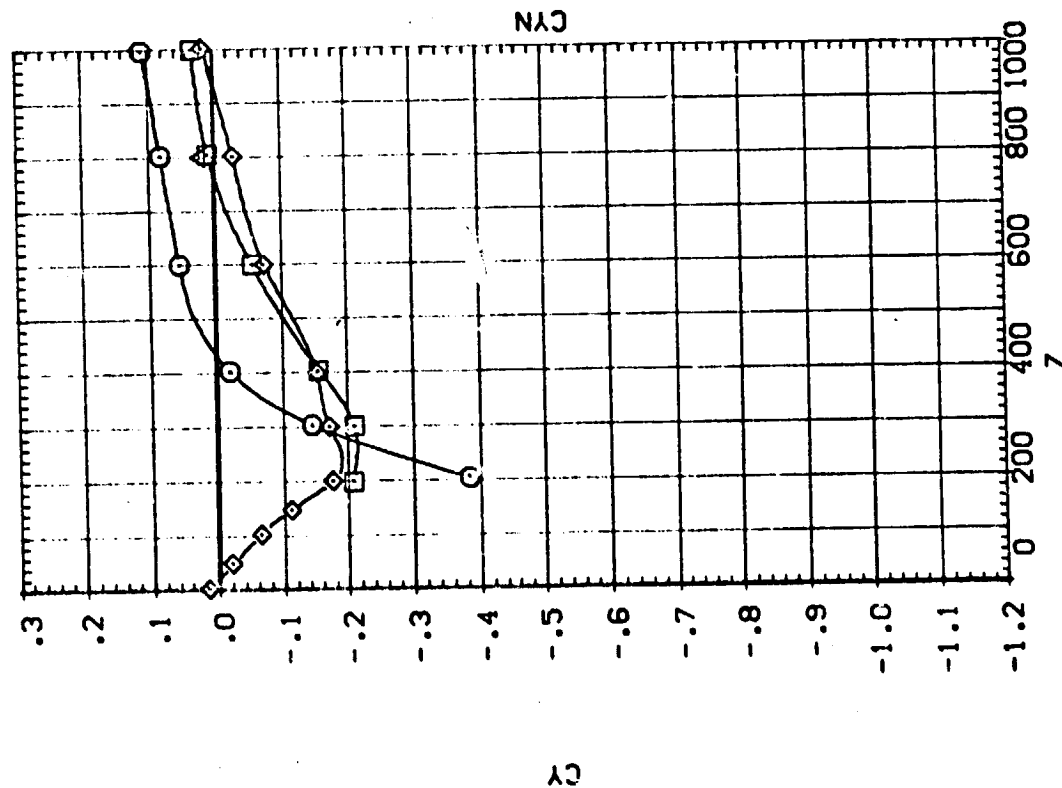
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ275)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .414 | 4.510 | PTOTL 28.900 |
| □ | 200.110 | .000 | BETA -5.000 |
| ◇ | 399.640 | -10.000 | DBETA .000 |
| △ | 799.980 | .000 | PC#B 1500.000 |



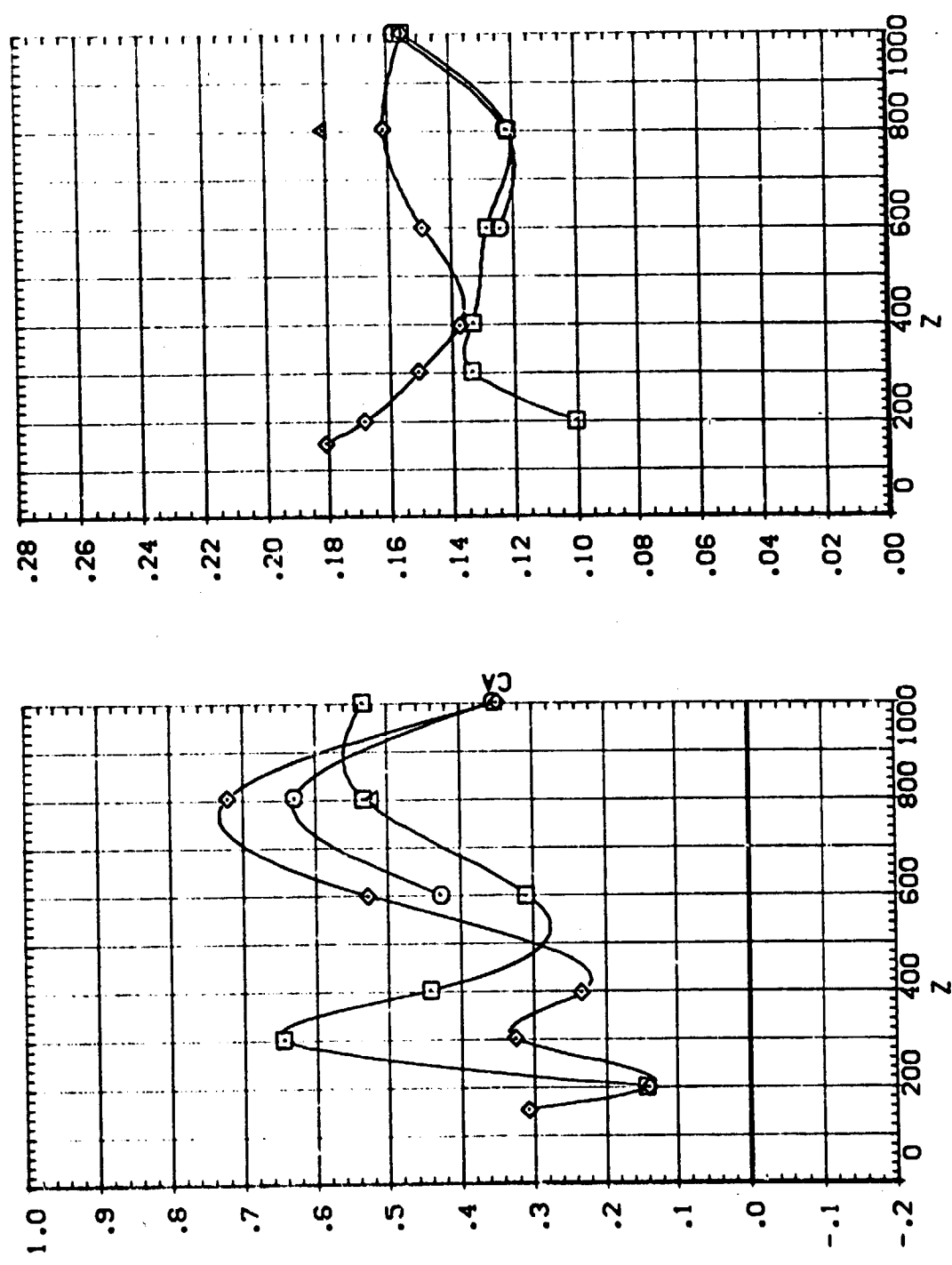
EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ276)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| PARAMETRIC VALUES | | |
|-------------------|----------|--------|
| Y | 1.997 | MACH |
| | 200.590 | ALPHA |
| | 399.270 | DALPHA |
| | 800.050 | X |
| | 4.510 | PTOTL |
| | .000 | BETA |
| | -10.000 | DBETA |
| | .000 | PCH48 |
| | 28.900 | |
| | -5.000 | |
| | -5.000 | |
| | 1500.000 | |

SYMBOL
 □
 ◇
 △

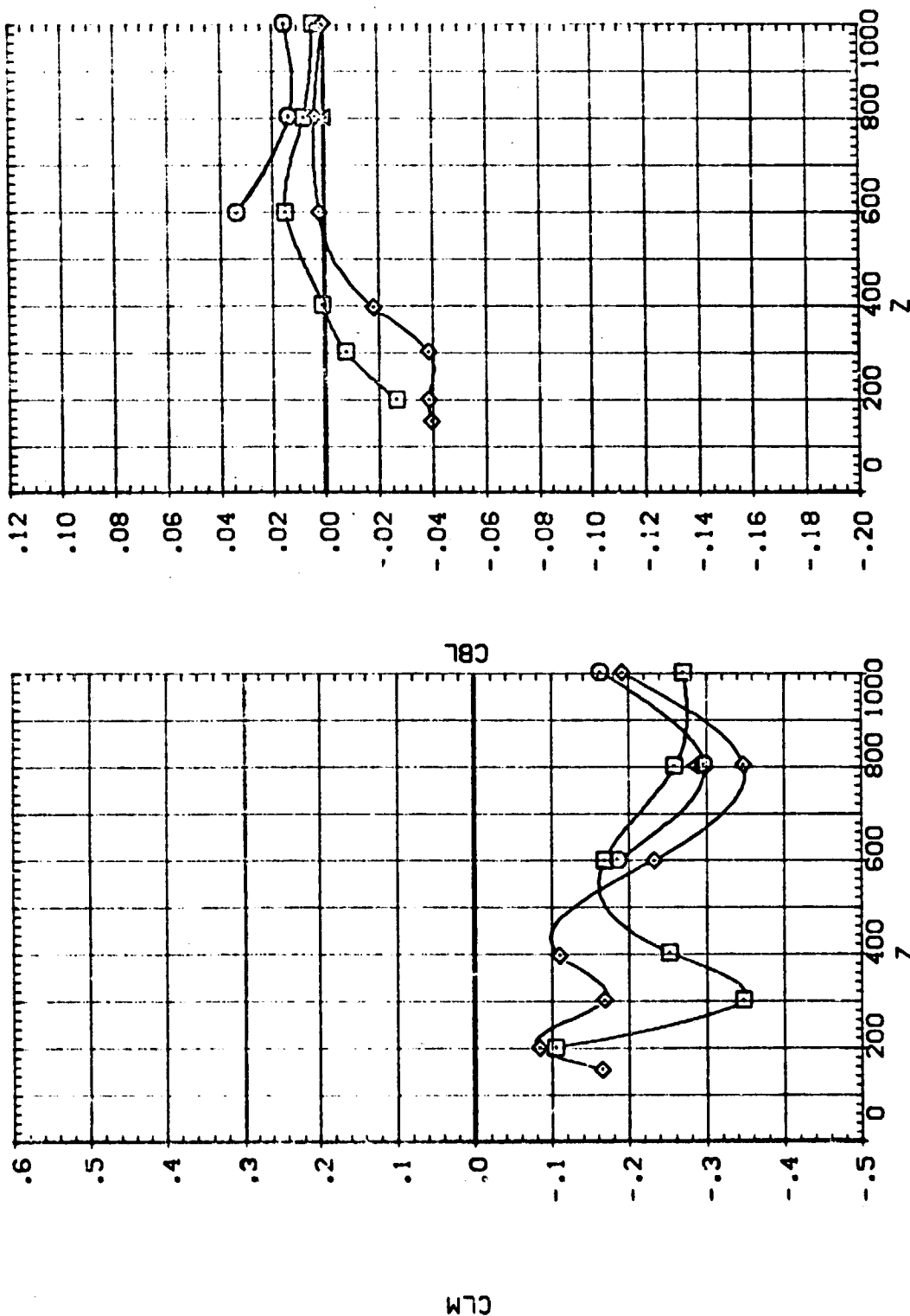


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RIJ276)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| Y | 1.997 | MACH | 4.510 | PITOTL | 28.900 |
|---------|--------|---------|-------|----------|--------|
| 200.590 | ALPHA | .000 | BETA | -5.000 | |
| 399.270 | DALPHA | -10.000 | DBETA | -5.000 | |
| 800.050 | X | .000 | PC-MB | 1500.000 | |

SYMBOL
○
□
◇
△

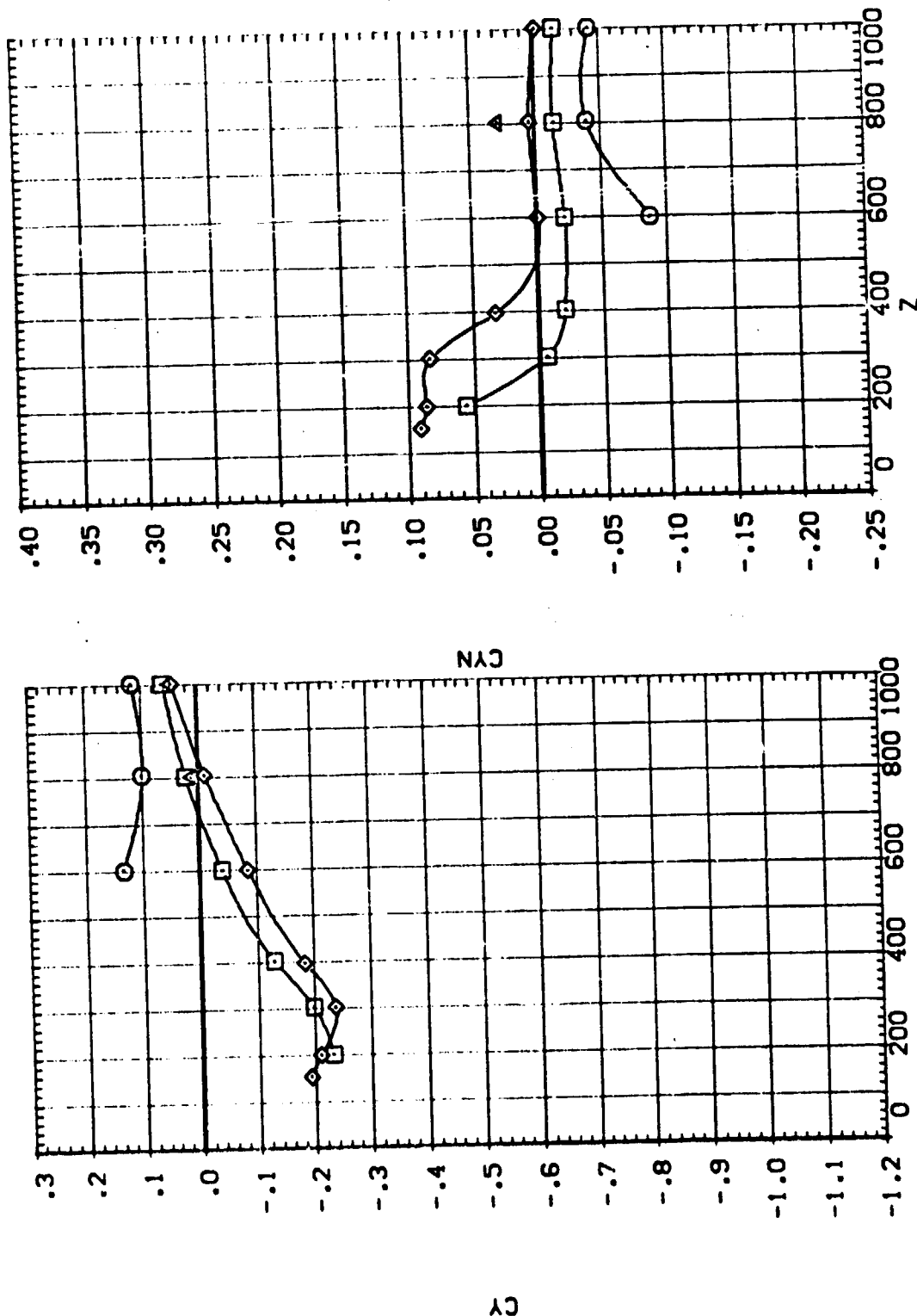


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ276)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | |
|--------|---------|---------|-------------------|----------|
| □ | 1.997 | 4.510 | POTOL | 28.900 |
| ◇ | 200.590 | .000 | BETA | -5.000 |
| △ | 399.270 | -10.000 | DBETA | -5.000 |
| | 800.050 | .000 | PC+PB | 1500.000 |



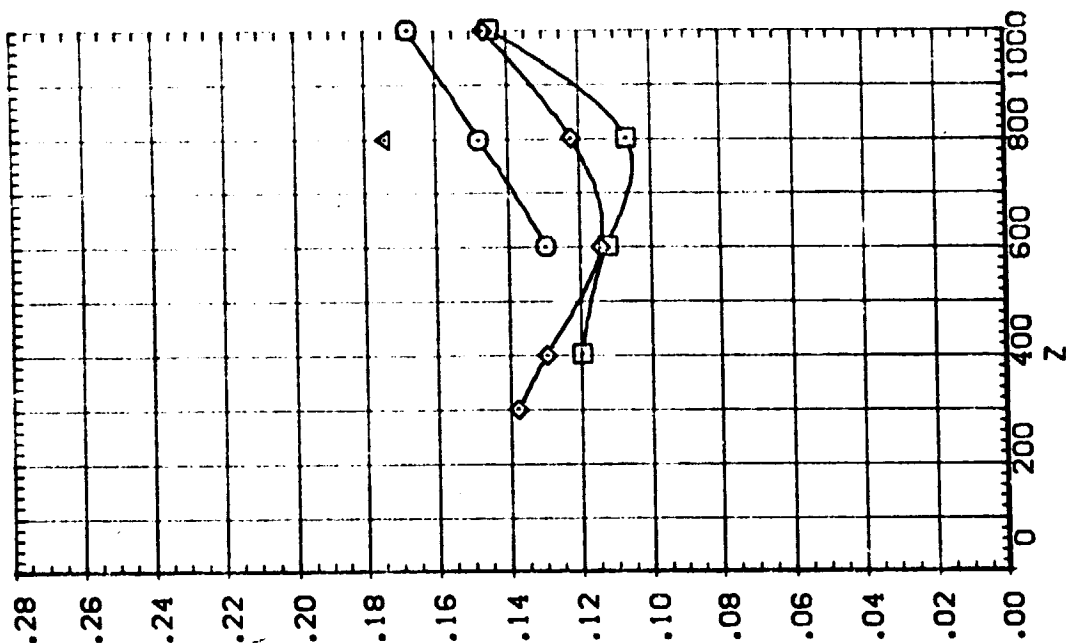
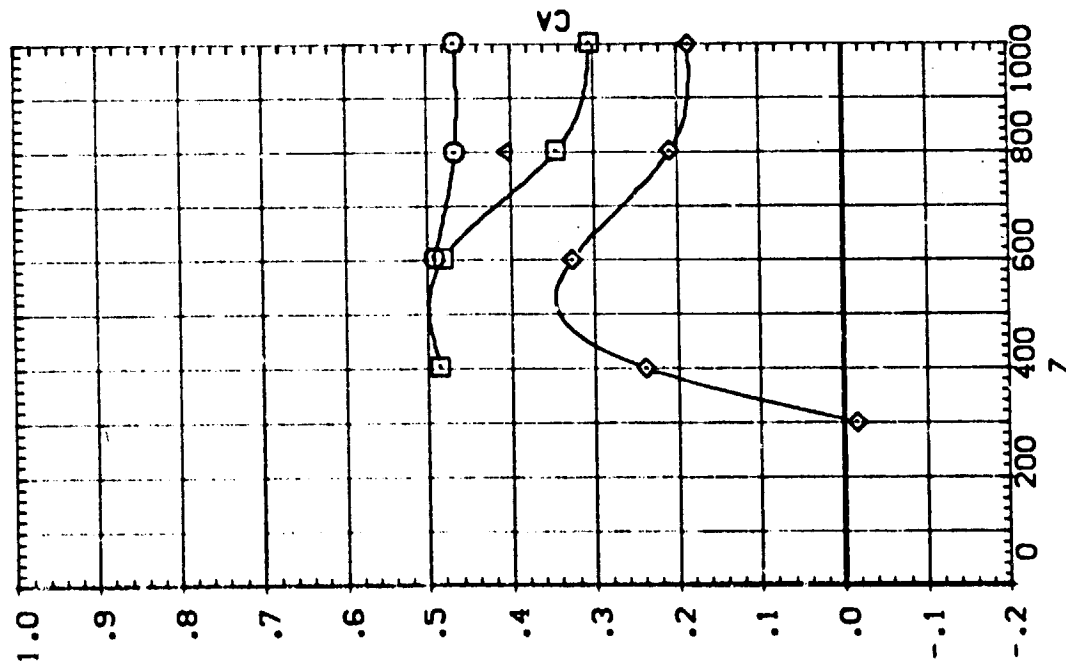
1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ277)

SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

Y 1.237 MACH 4.510 PTOTL 28.900
 200.750 ALPHA .000 BETA -5.000
 400.150 DALPHA -10.000 DBETA -10.000
 800.030 X .000 PC+8 1500.000



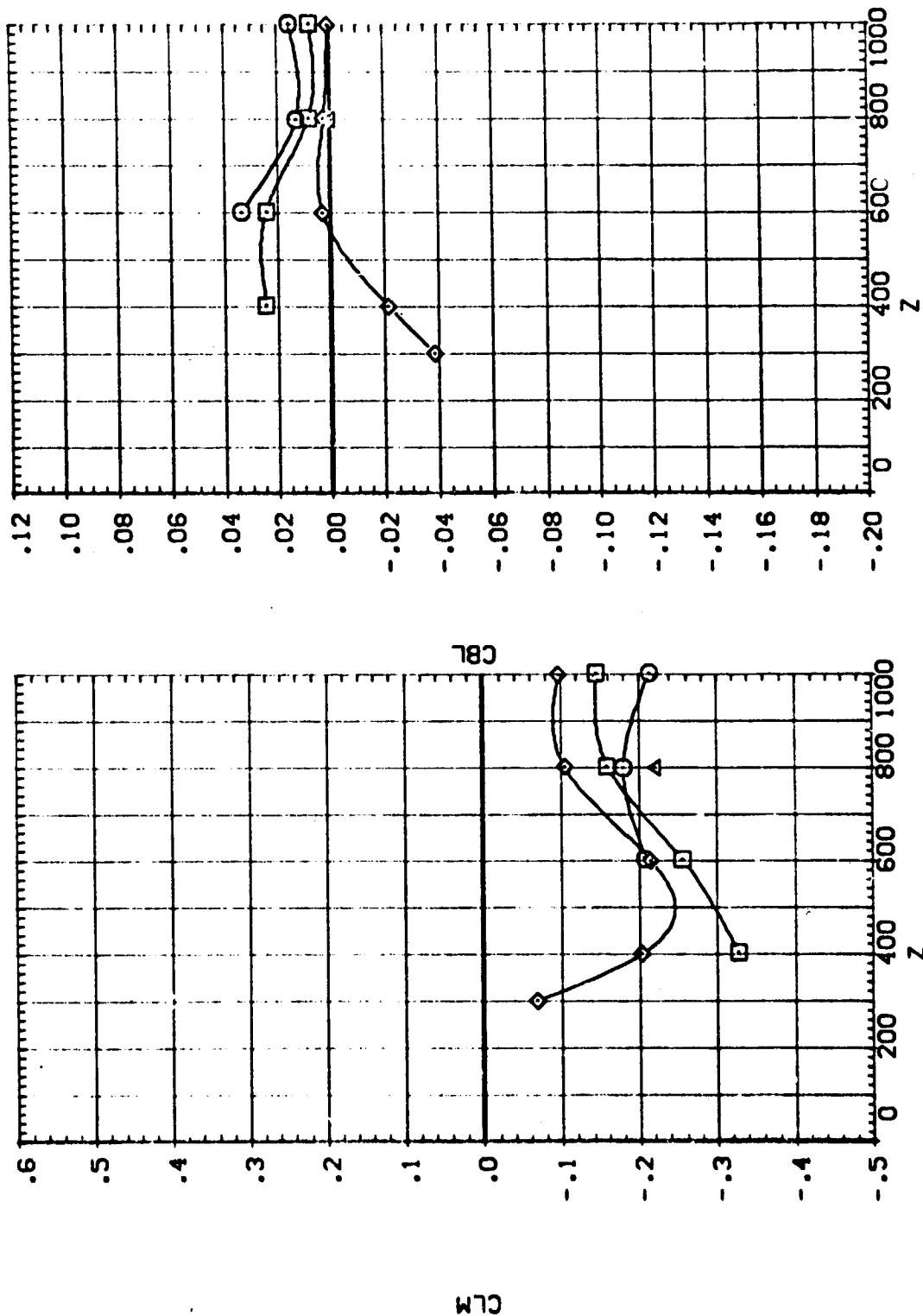
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ277)

| ST-BOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| | | MACH | 4.510 | PTOTL | 28.900 | |
| ○ | 1.237 | ALPHA | .000 | BETA | -5.000 | |
| □ | 200.750 | ALPHA | -10.000 | DBETA | -10.000 | |
| ◇ | 400.150 | ALPHA | .000 | PC-HB | 1500.000 | |
| △ | 800.030 | ALPHA | | | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ277)

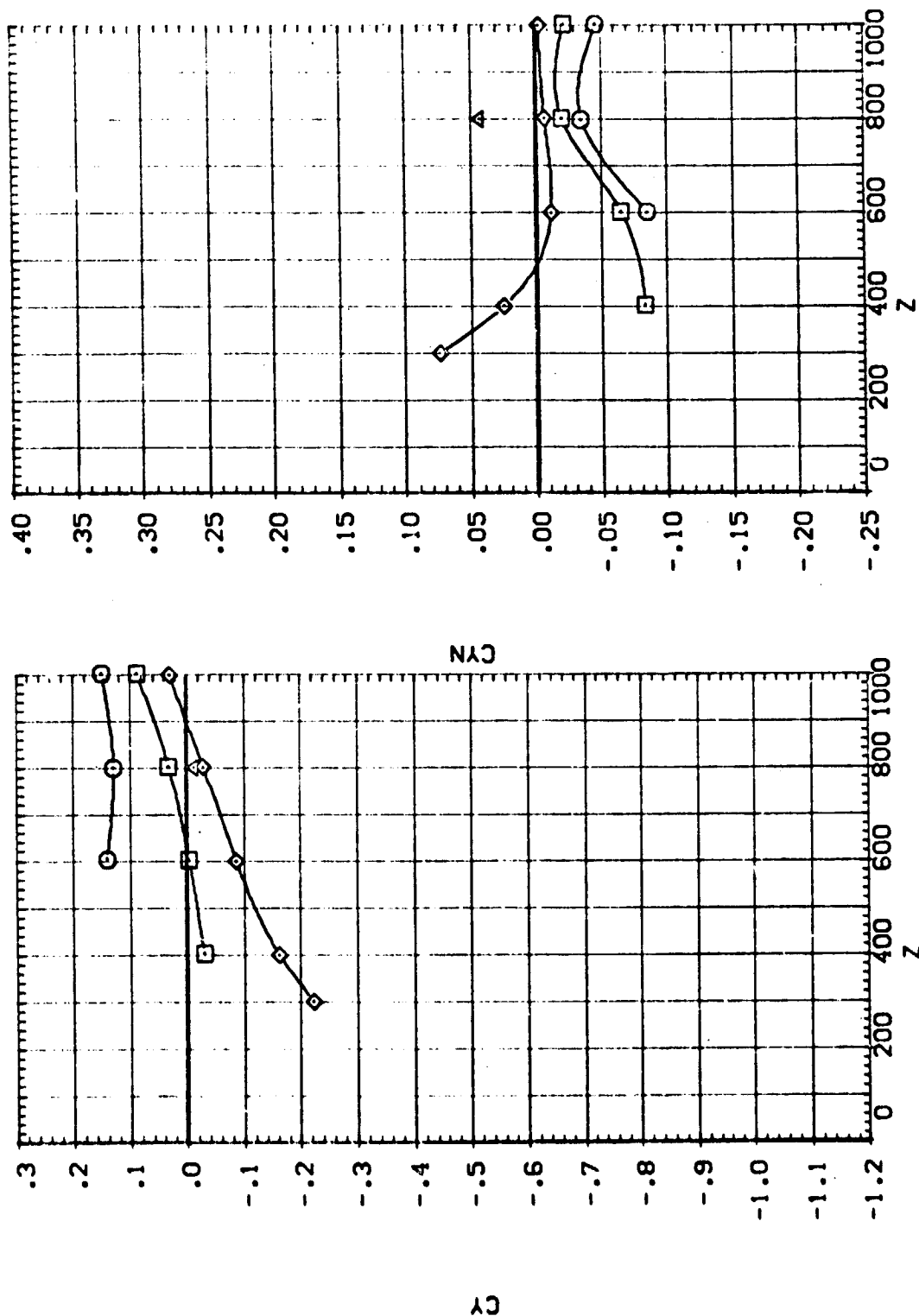
SYMBOL

Y

PARAMETRIC VALUES

| SYMBOL | Y | MACH | PIOTL | 28.900 |
|--------|---------|---------|-------|----------|
| ○ | 1.237 | 4.510 | PIOTL | 28.900 |
| □ | 200.750 | .000 | BETA | -5.000 |
| ◇ | 400.150 | -10.000 | DBETA | -10.000 |
| △ | 800.030 | .000 | PC+8 | 1500.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

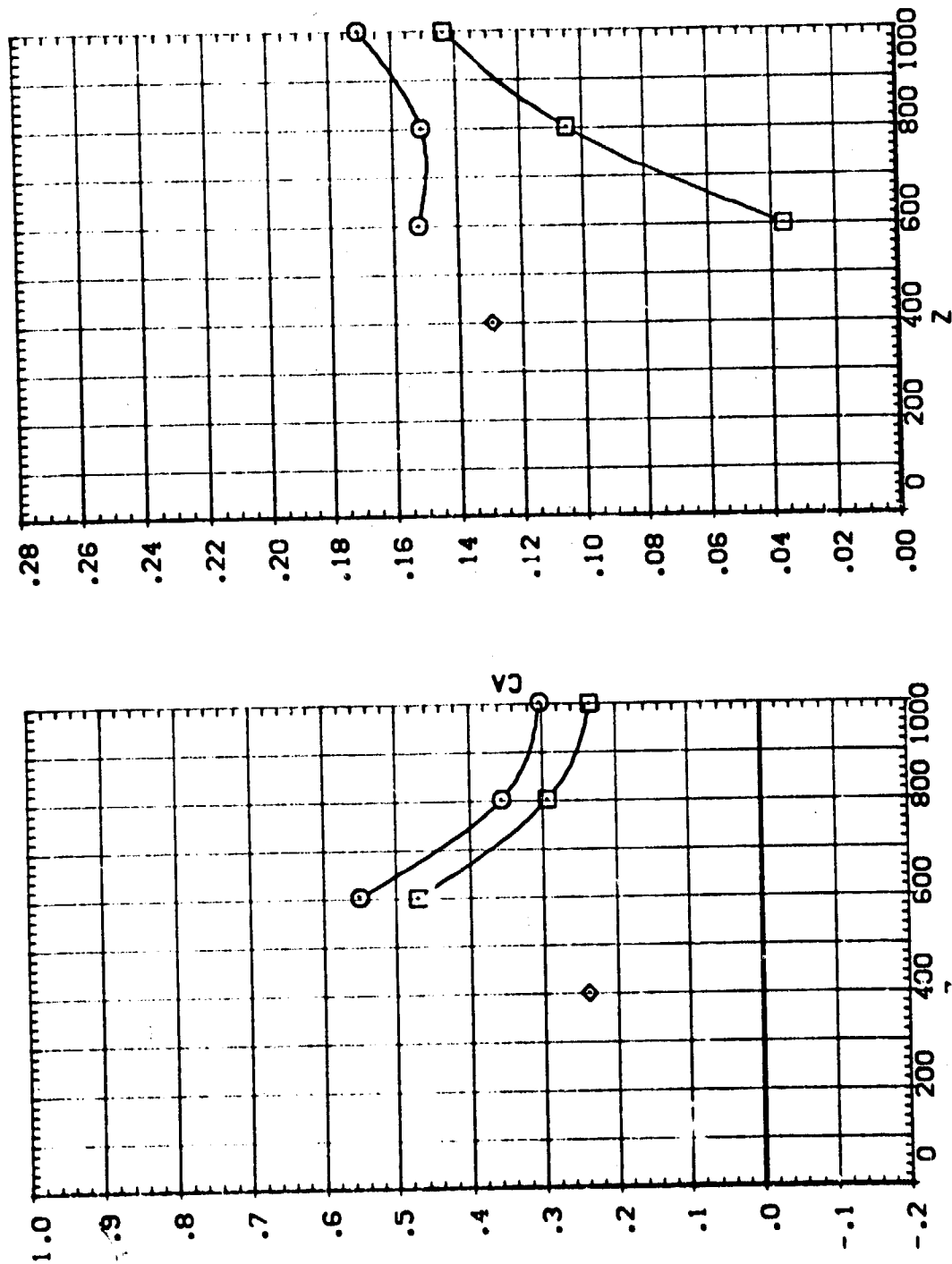


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RTJ278)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | P10TL | 28.900 | |
| ○ | 270.700 | ALPHA | 4.510 | BETA | -5.000 |
| □ | 399.960 | DALPHA | .000 | DBETA | -20.000 |
| ◇ | 401.120 | X | .000 | PC+PB | 1500.000 |



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ278)

SYMBOL

Y

○ □ ◇

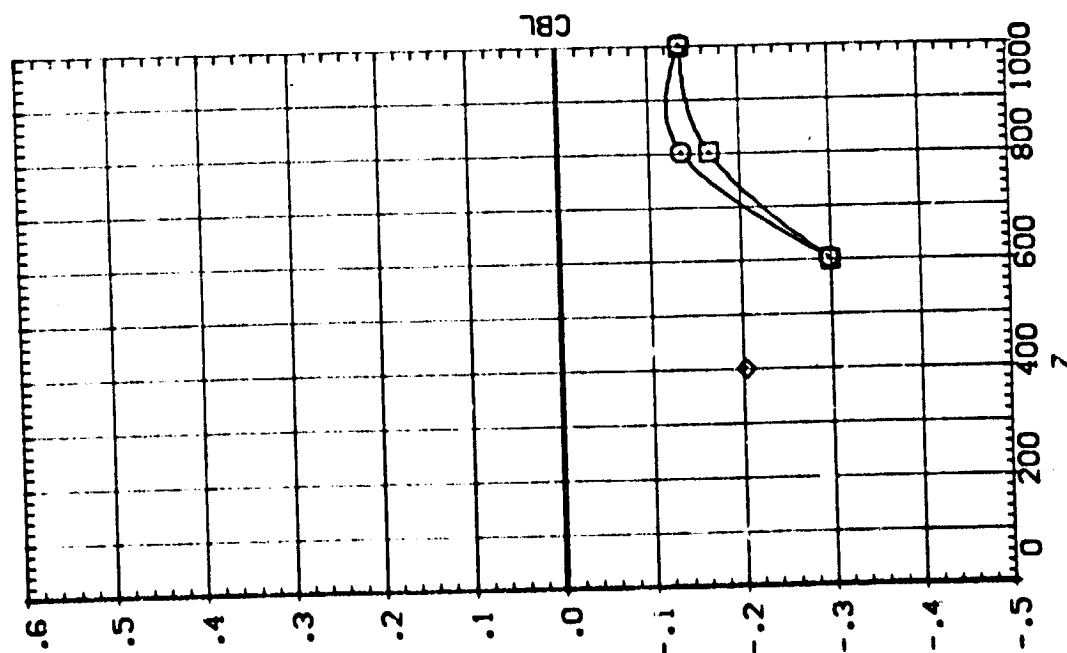
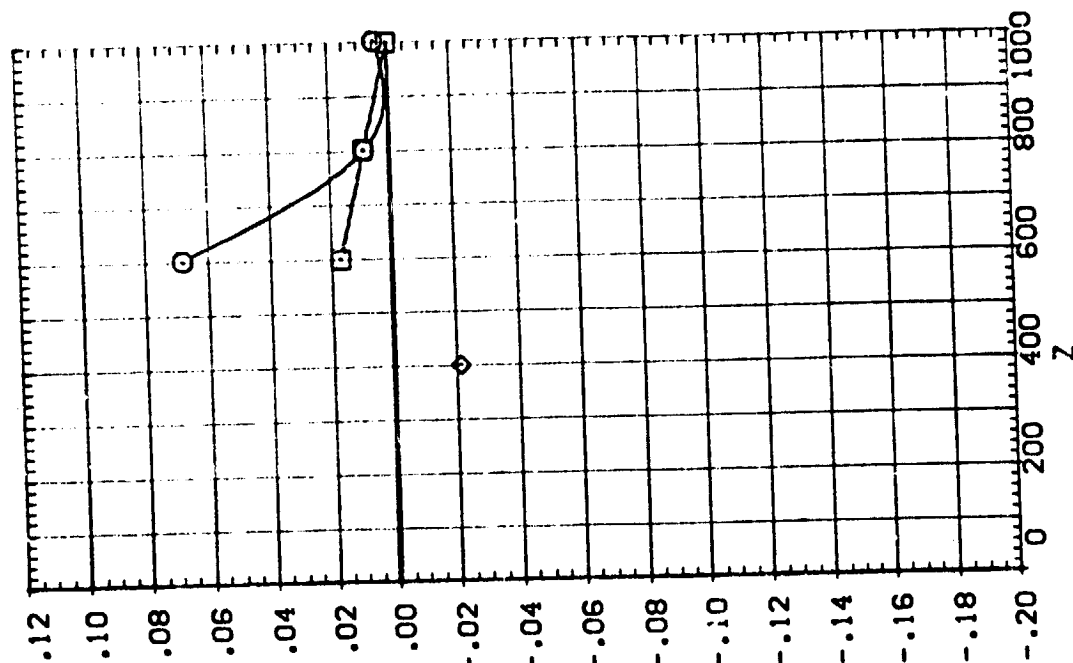
200.700
399.550
401.220

MACH
ALPHA
DALPHA

PARAMETRIC VALUES

4.510 PTOTL 28.800
.000 BETA -5.070
-10.000 DBETA -20.000
.000 PC4*8 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

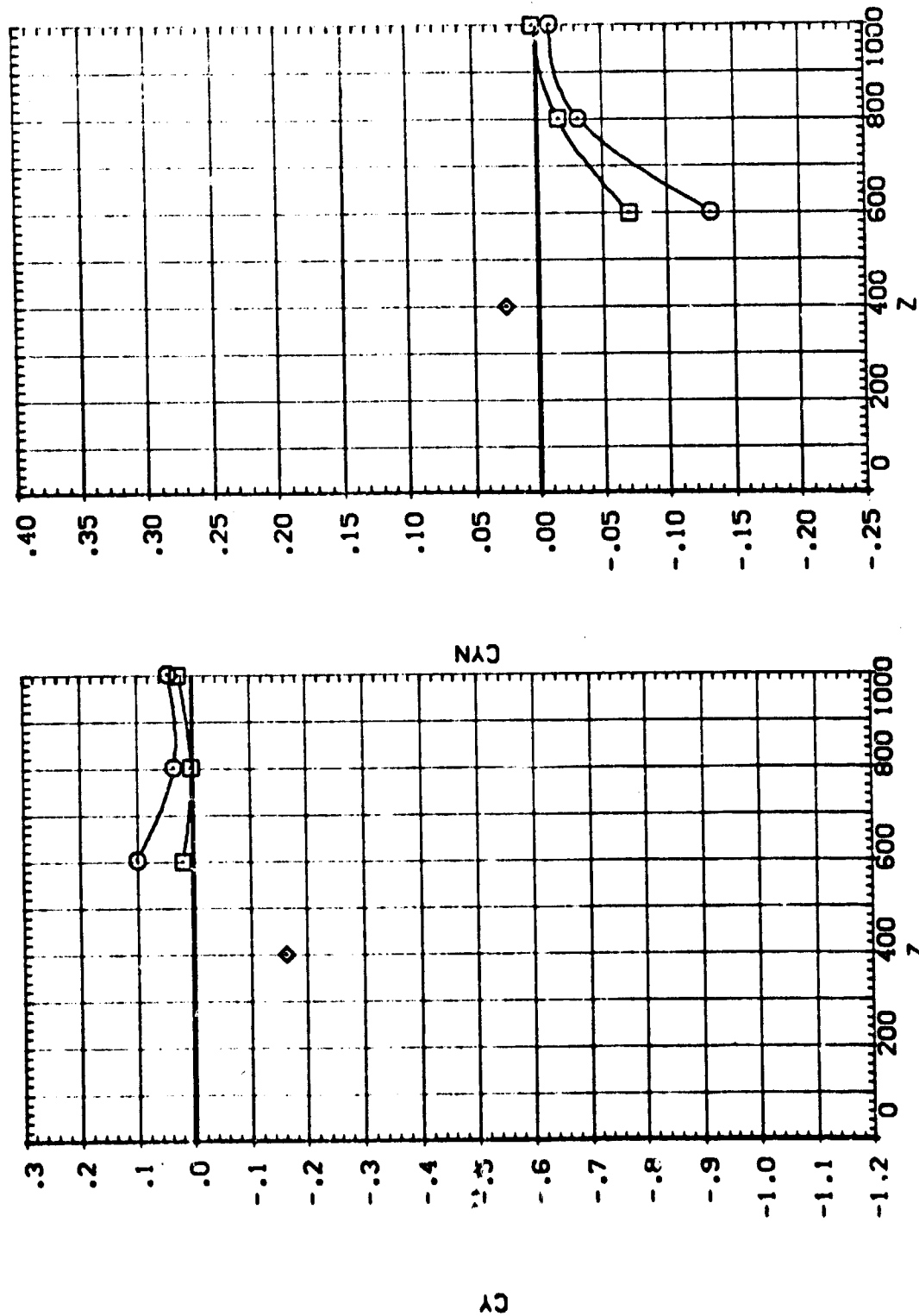


EFFECT OF SRB W/PLUMES SEPARATION ON 09B/ET AERODYNAMIC CHARACTERISTICS

[A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ278)]

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

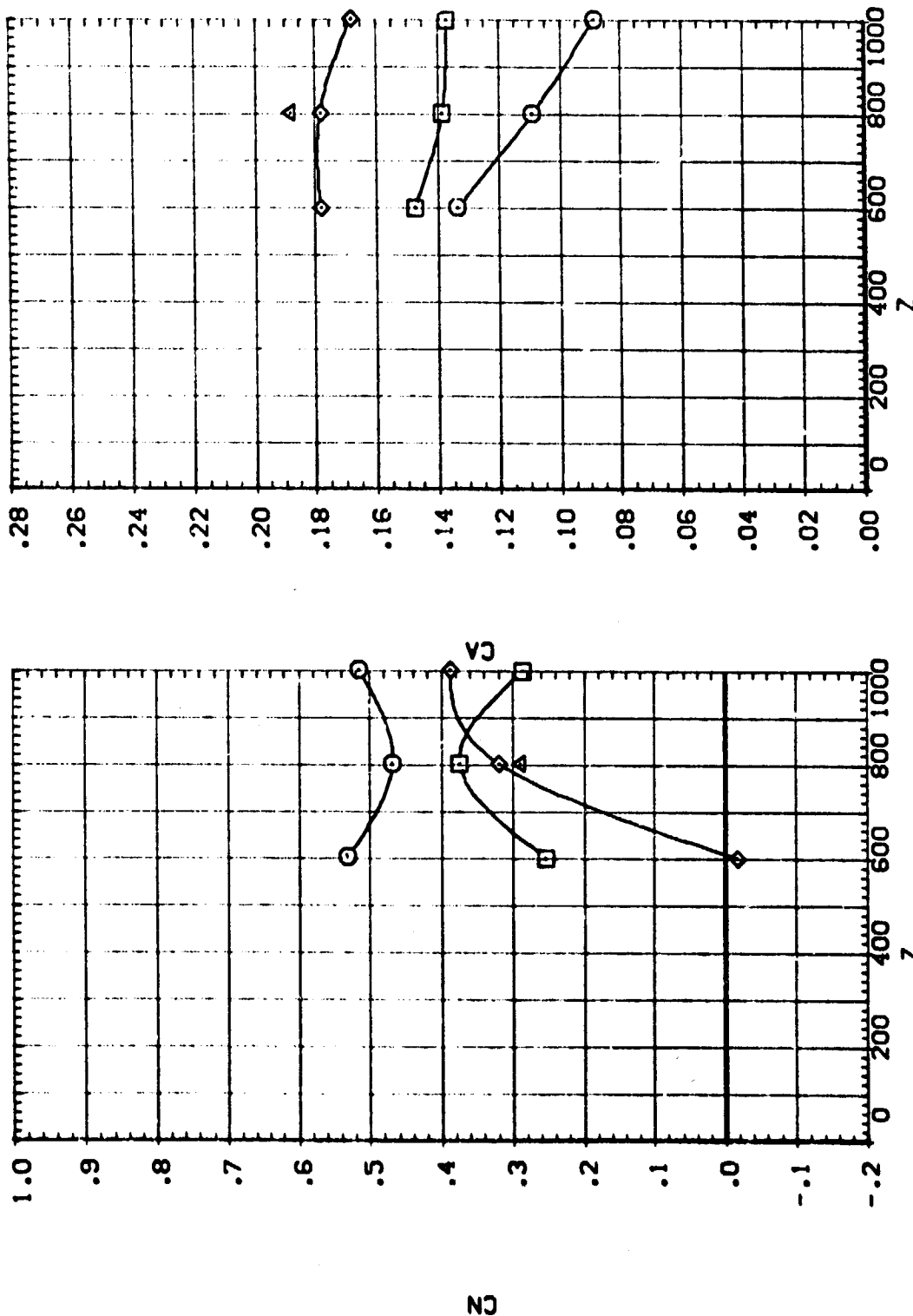
| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|--------|---------|----------|
| | Y | MACH | PTOTL | 28.900 |
| ○ | 200.700 | ALPHA | .000 | BETA |
| □ | 399.960 | DALPHA | -10.000 | DBETA |
| ◇ | 401.220 | X | .000 | PC+PB |
| | | | | 1500.000 |



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ279)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | 2.513 | MACH | 4.510 | PTOTL | 28.900 |
|--------|---------|--------|---------|-------|----------|--------|
| ○ | 202.170 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 402.070 | DALPHA | -20.000 | DBETA | 5.000 | |
| △ | 799.990 | X | .000 | PC-MB | 1500.000 | |

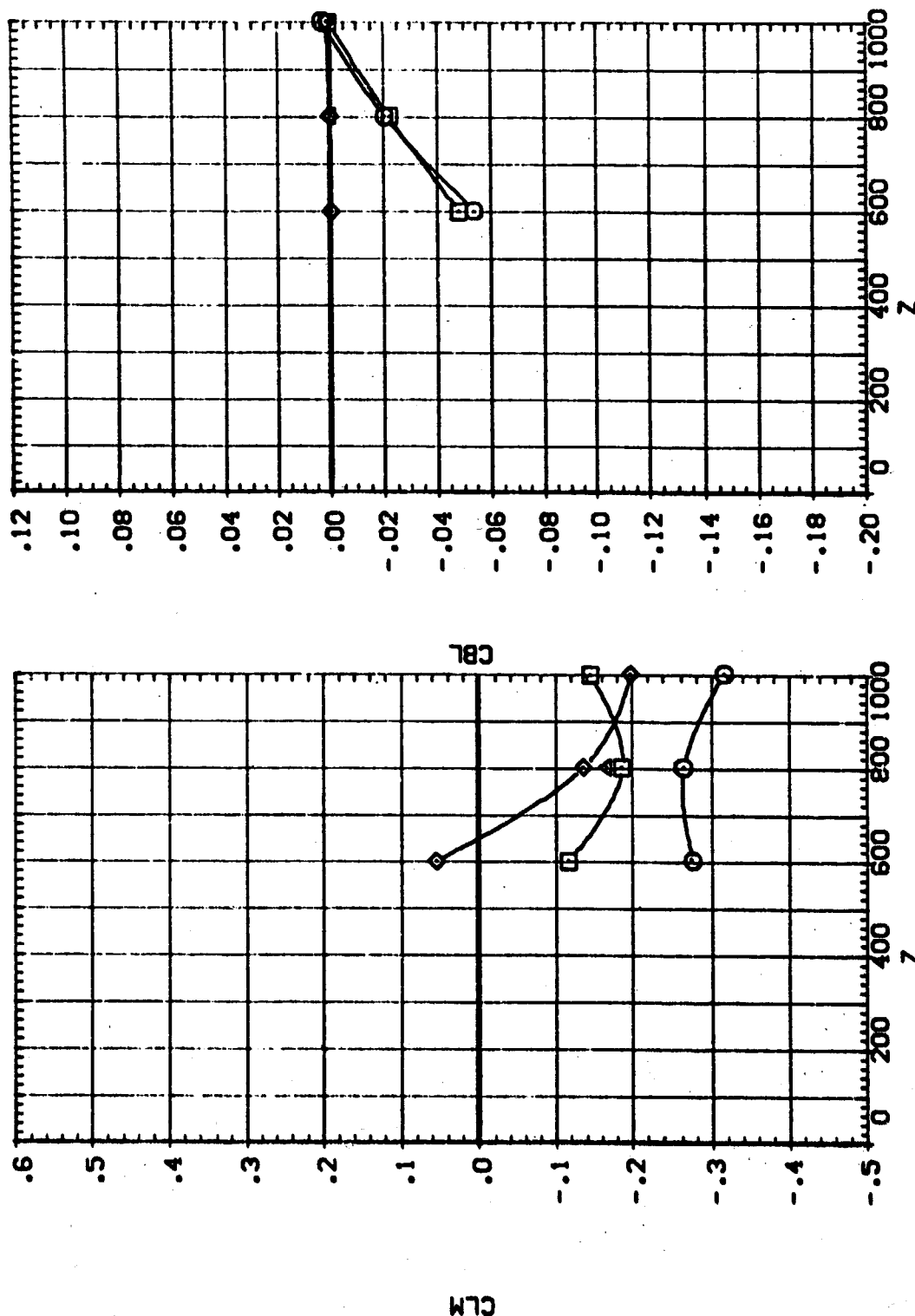


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SR3(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ279)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

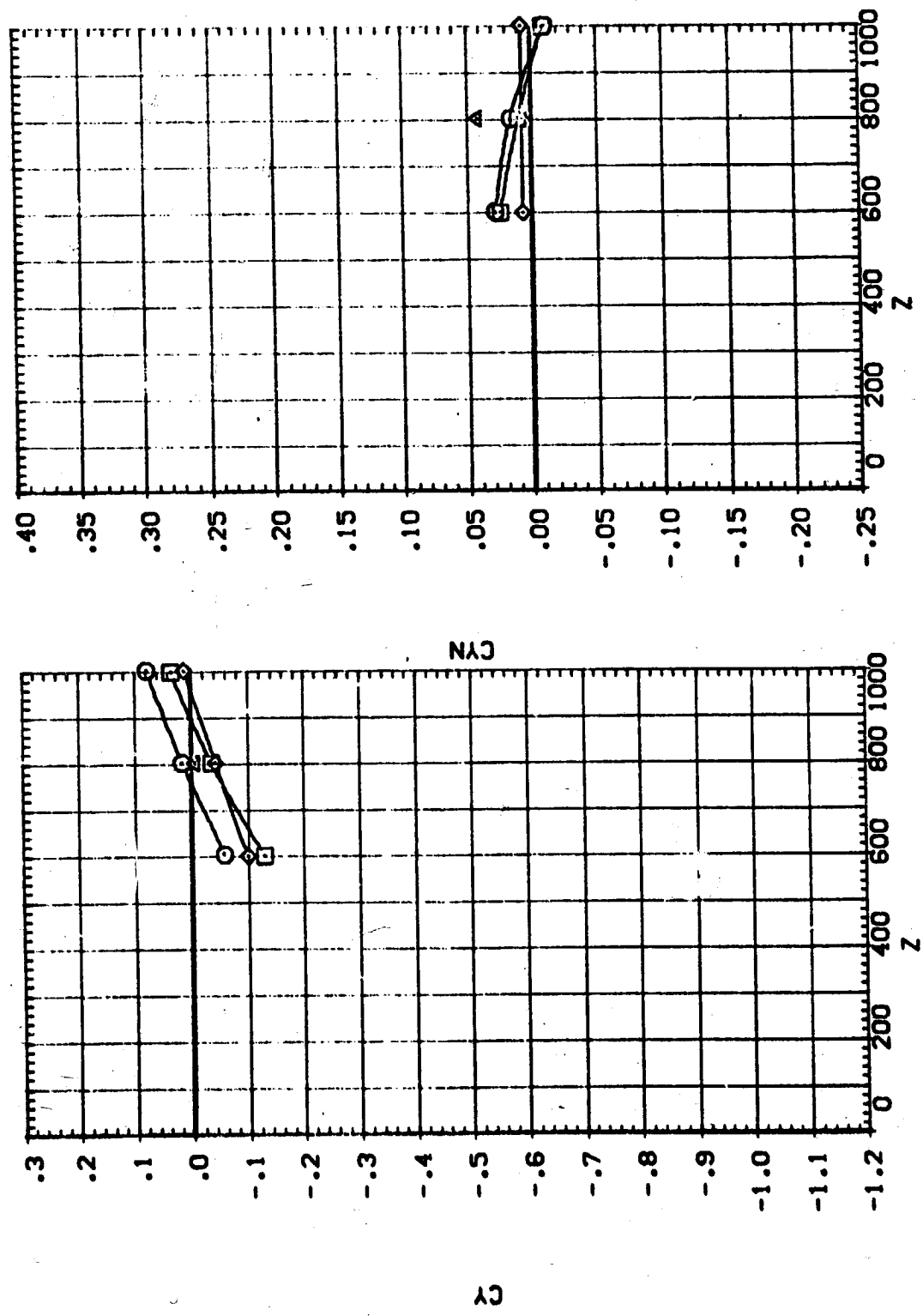
| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | PITOTL | 28.900 | |
| □ | 2.513 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 202.170 | DALPHA | -20.000 | DBETA | 5.000 | |
| △ | 402.070 | X | .000 | PC+8 | 1500.000 | |
| | 799.990 | | | | | |



EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 202.170 | ALPHA | .000 | BETA | -5.000 | |
| □ | 402.070 | DELTA | -20.000 | DBETA | 5.000 | |
| ◇ | 799.950 | X | .000 | PC+8 | 1500.000 | |

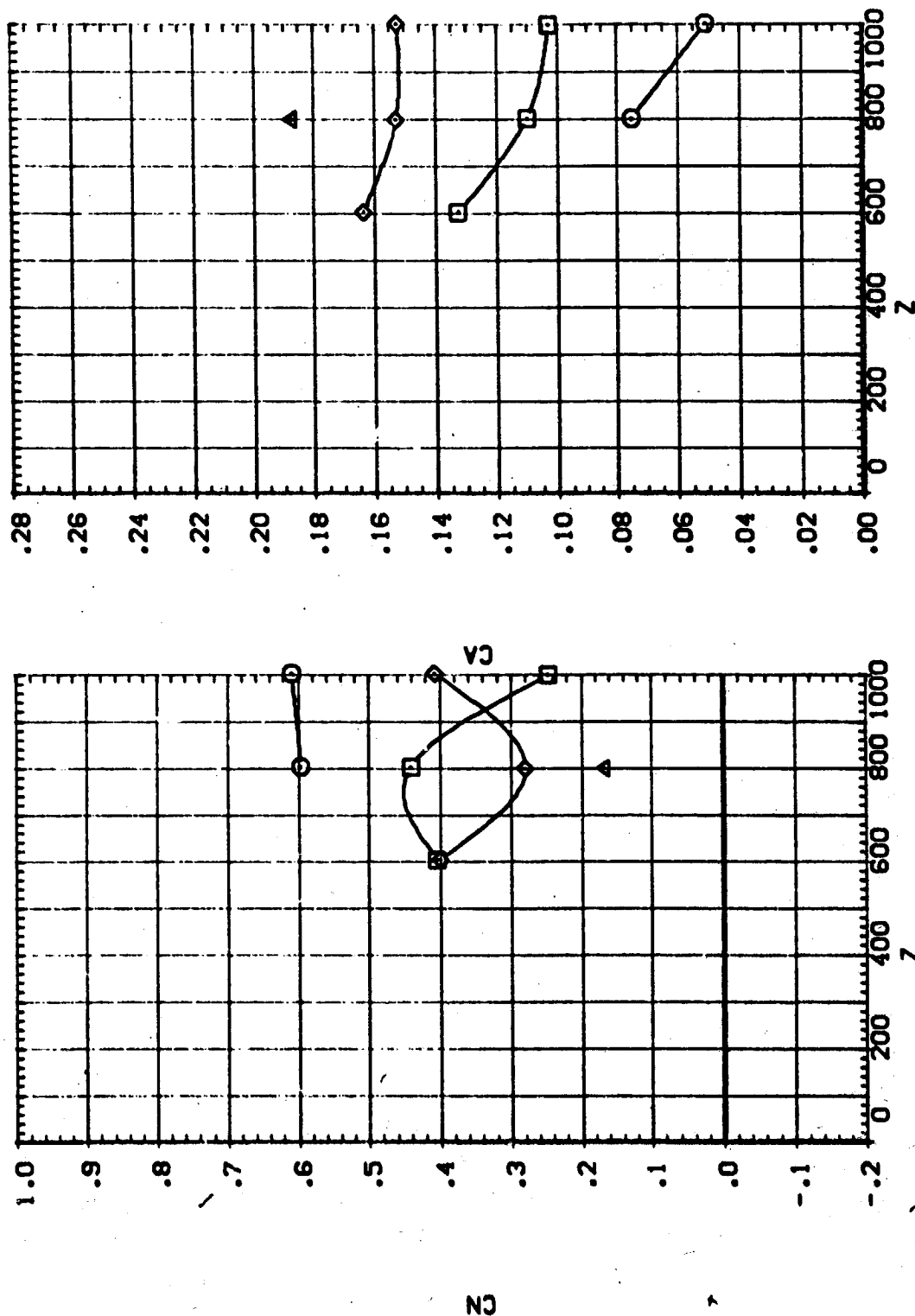


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ280)

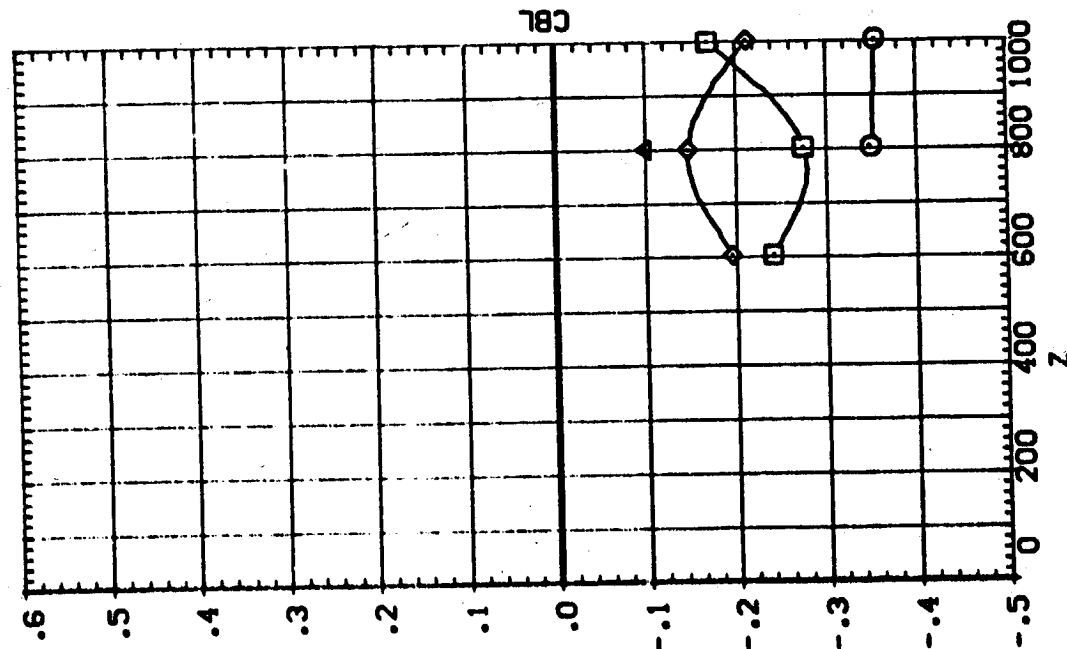
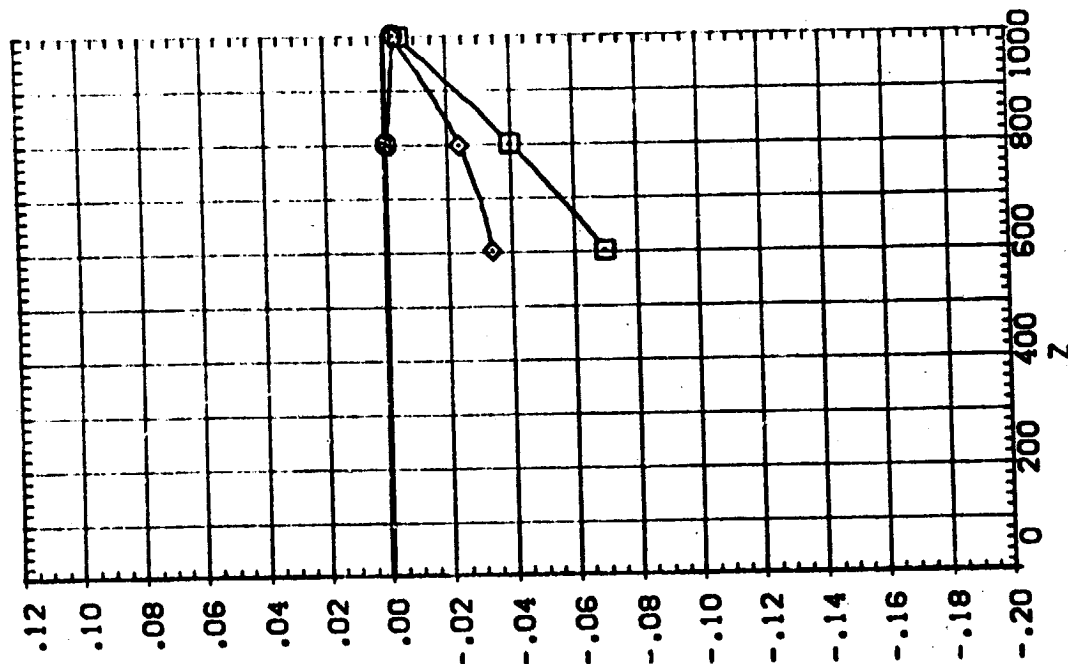
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| | | MACH | 4.510 | POTIL | 28.900 | |
| □ | 200.770 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 400.070 | DALPHA | -20.000 | DBETA | .000 | |
| △ | 801.000 | X | .000 | PC+PB | 1500.000 | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 200.770 |
| Y | 400.070 |
| Y | 801.000 |
| MACH | 4.510 |
| ALPHA | .000 |
| DALPHA | -20.000 |
| X | .000 |
| PTOTL | 28.900 |
| BETA | -5.000 |
| DBETA | .000 |
| PC+PB | 1500.000 |

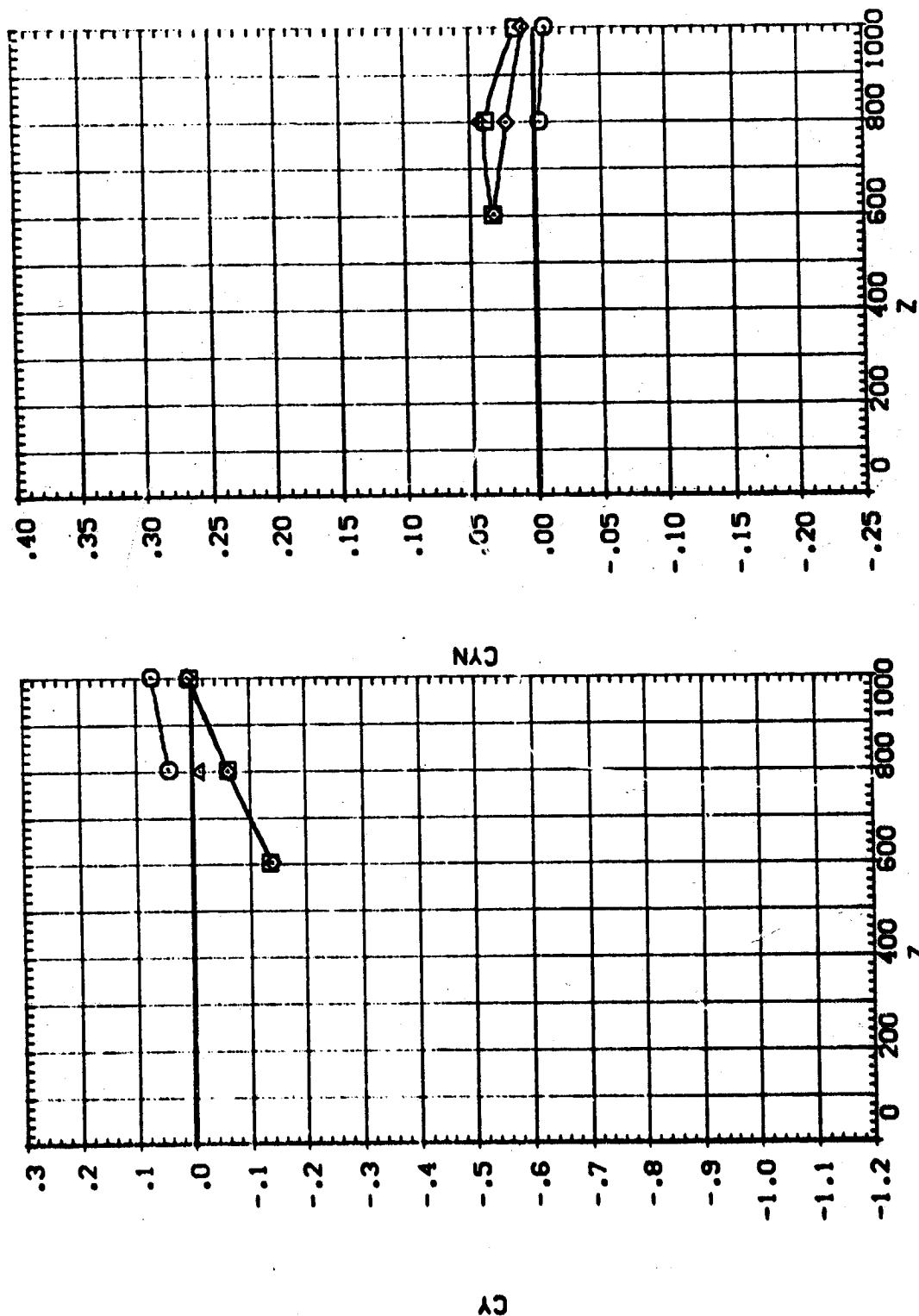


EFFECT OF SRB W/PLUMES SEPARATION ON 08/ET AERODYNAMIC CHARACTERISTICS

JA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ280)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.500 | |
| □ | 200.770 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 400.070 | DALPHA | -20.000 | DBETA | .000 | |
| △ | 601.000 | X | .000 | PC+PB | 1500.000 | |



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ281)

SYMBOL

□ ◇ △

Y

.865
201.550
400.380
800.330

MACH
ALPHA
DALPHA
X

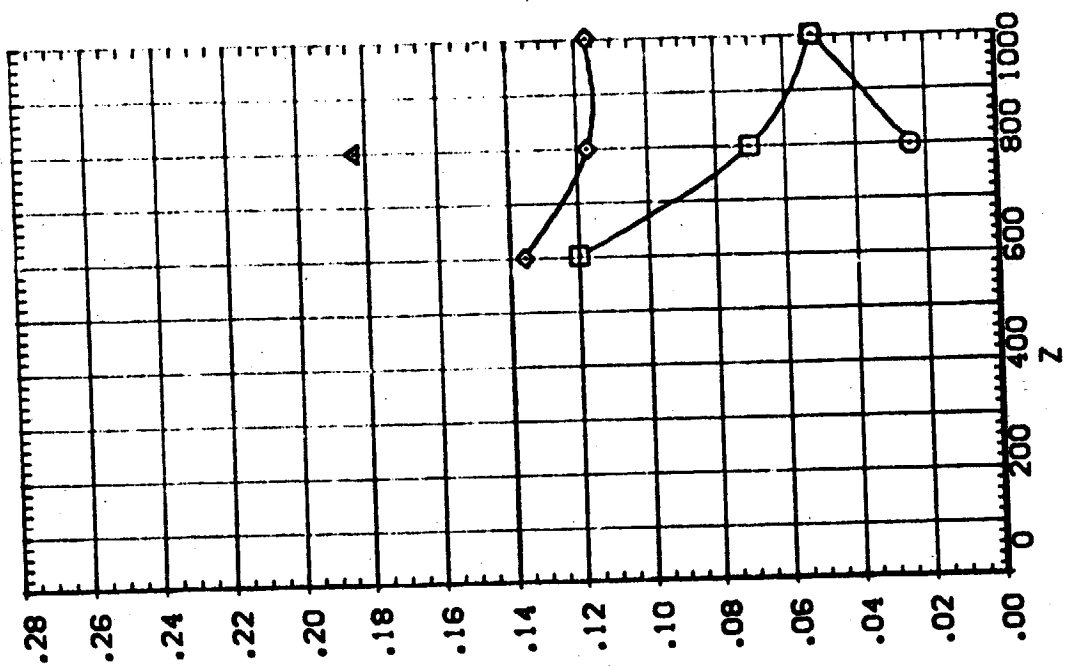
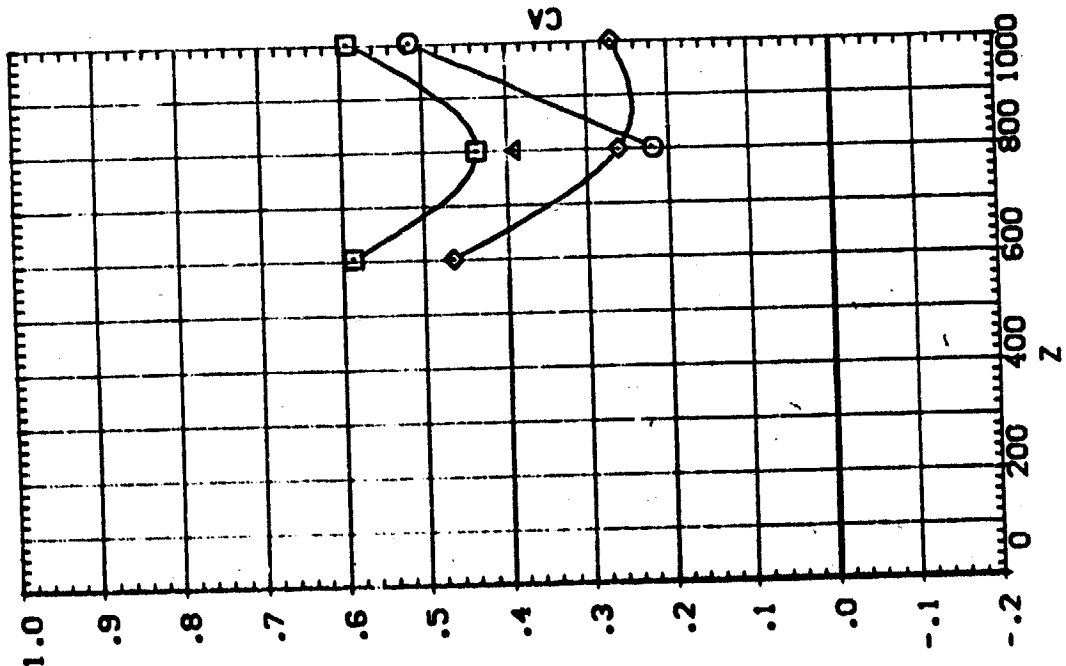
PARAMETRIC VALUES

4.510
.000
-20.000
.000

PTOTL
BETA
DBETA
PC+PB

28.900
-5.000
-5.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

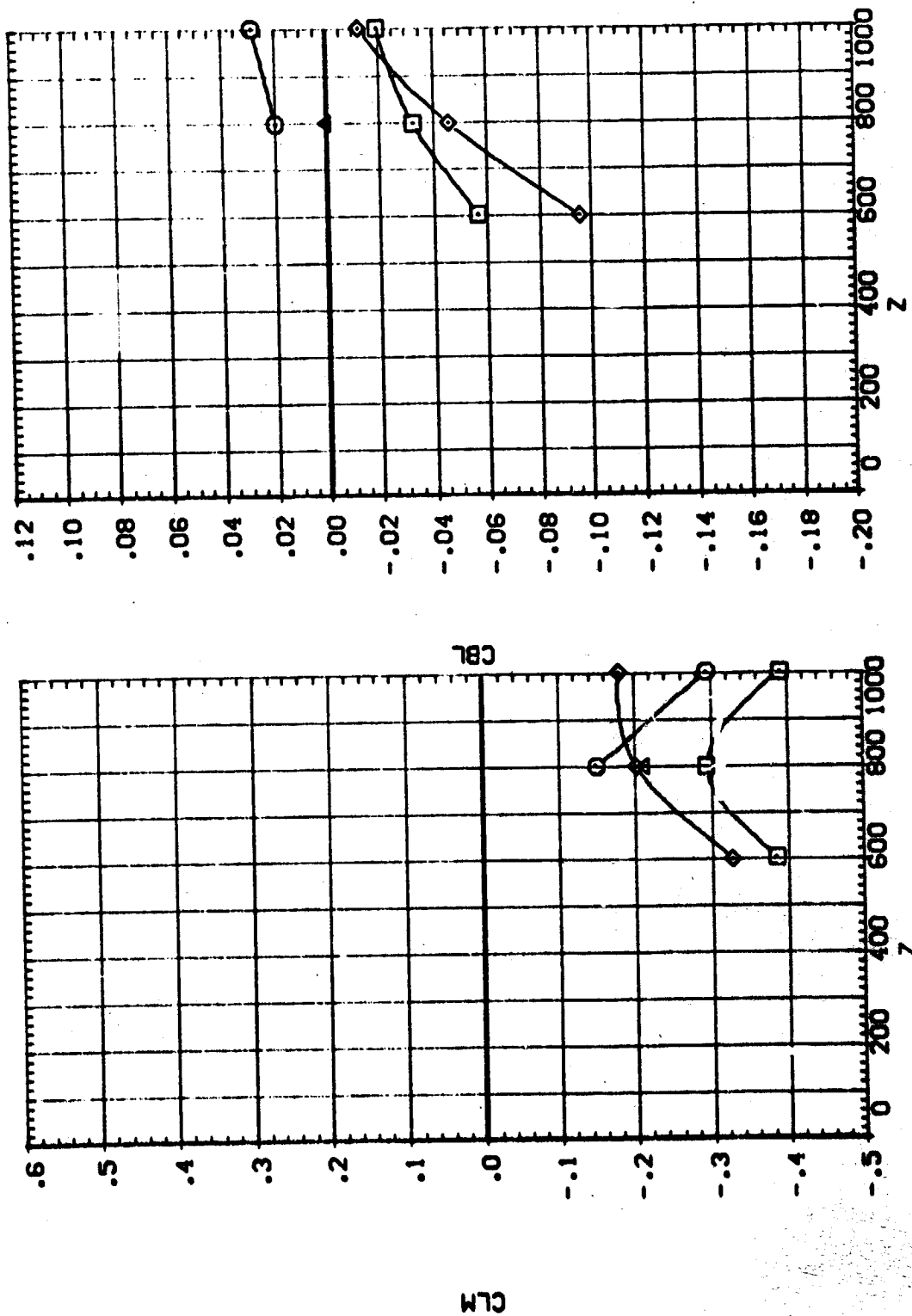


EFFECT OF SRB W/PLUMES SEPARATION ON 09B/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ281)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 201.950 | ALPHA | .000 | BETA | -5.000 | |
| □ | 400.380 | DALPHA | -20.000 | DBETA | -5.000 | |
| ◇ | 800.330 | X | .000 | PC+PB | 1500.000 | |

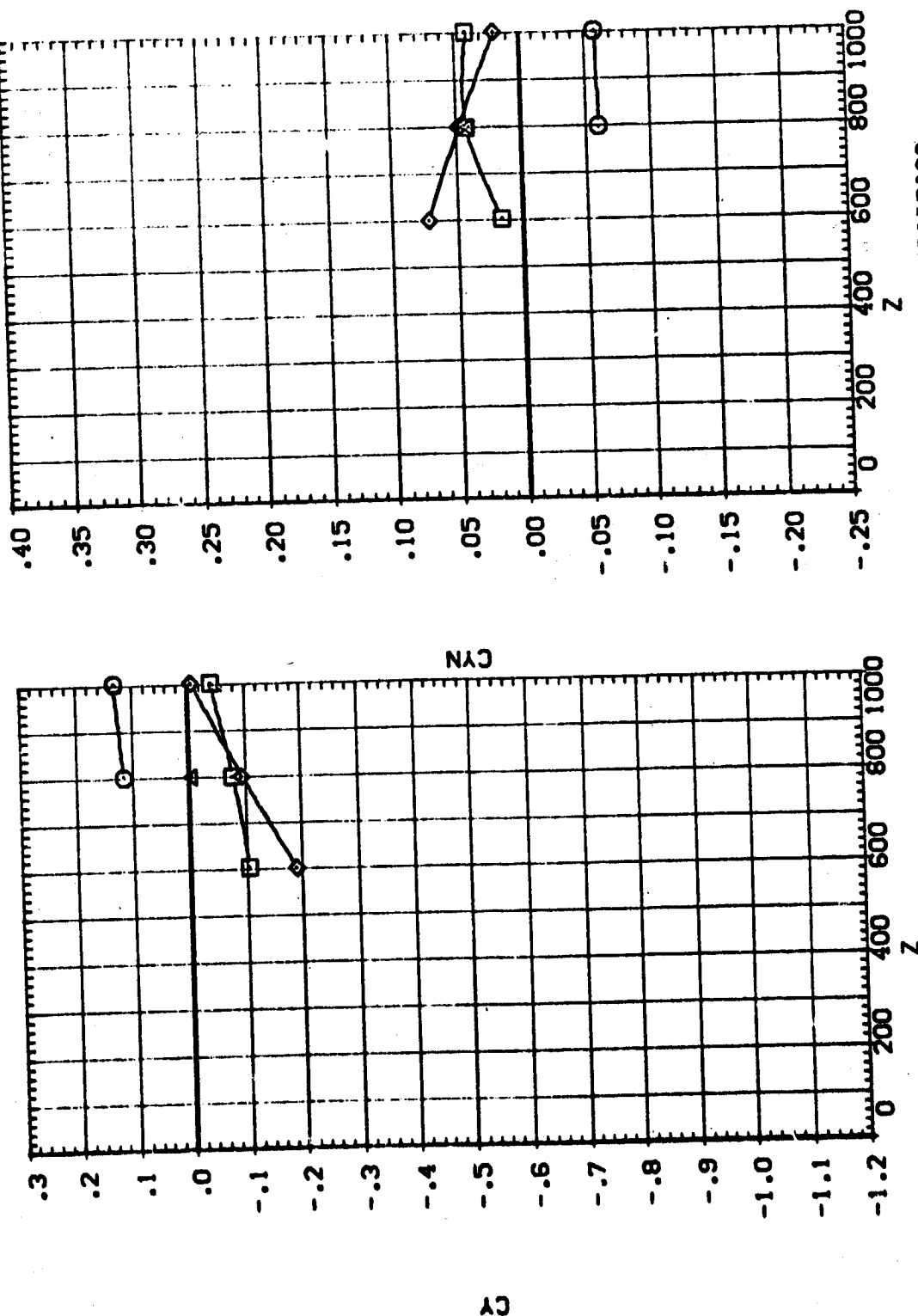


1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ281)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 0.885 |
| WCH | 4.510 |
| PTOTL | 28.500 |
| ALPHA | .000 |
| BETA | -5.000 |
| DBETA | -5.000 |
| POF8 | 1500.000 |
| X | .000 |

SYMBOL
○ □ ◇ △



EFFECT OF SRB Y/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ282)

SYMBOL

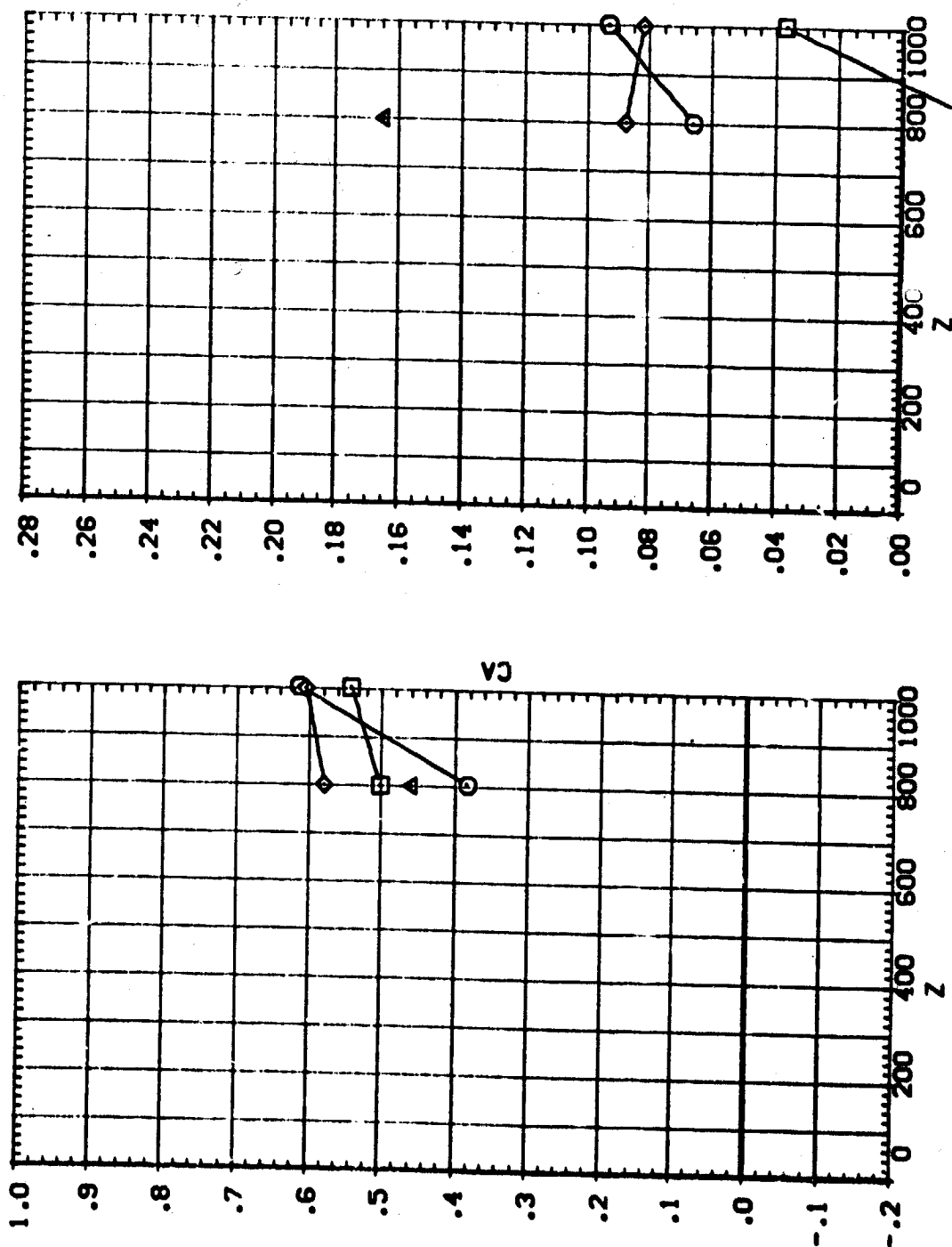
○ □ ◇ △

Y
-746
201.750
401.140
799.500

PARAMETRIC VALUES
MACH 4.510
ALPHA .000
DALPHA -20.000
X .000

28.500
-5.000
-10.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

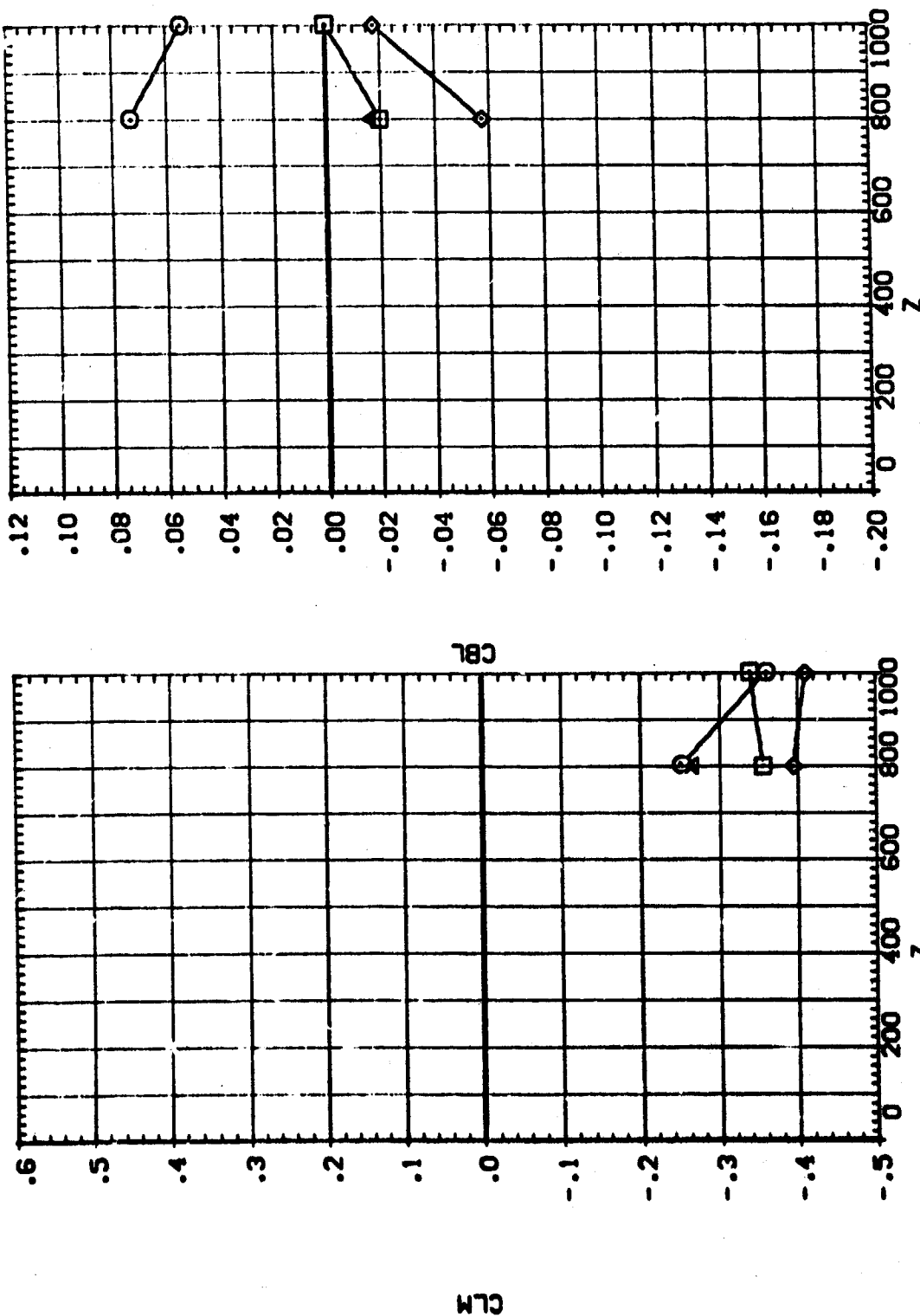


EFFECT OF SRB V/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ282)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | WAO1 | PARAMETRIC VALUES | 28.500 |
|--------|---------|---------|-------------------|----------|
| ○ | -746 | 4.510 | PTOTL | -5.000 |
| □ | 201.790 | .000 | BETA | -10.000 |
| ◇ | 401.140 | -20.000 | DBETA | 1500.000 |
| △ | 798.500 | .000 | PO+P8 | |

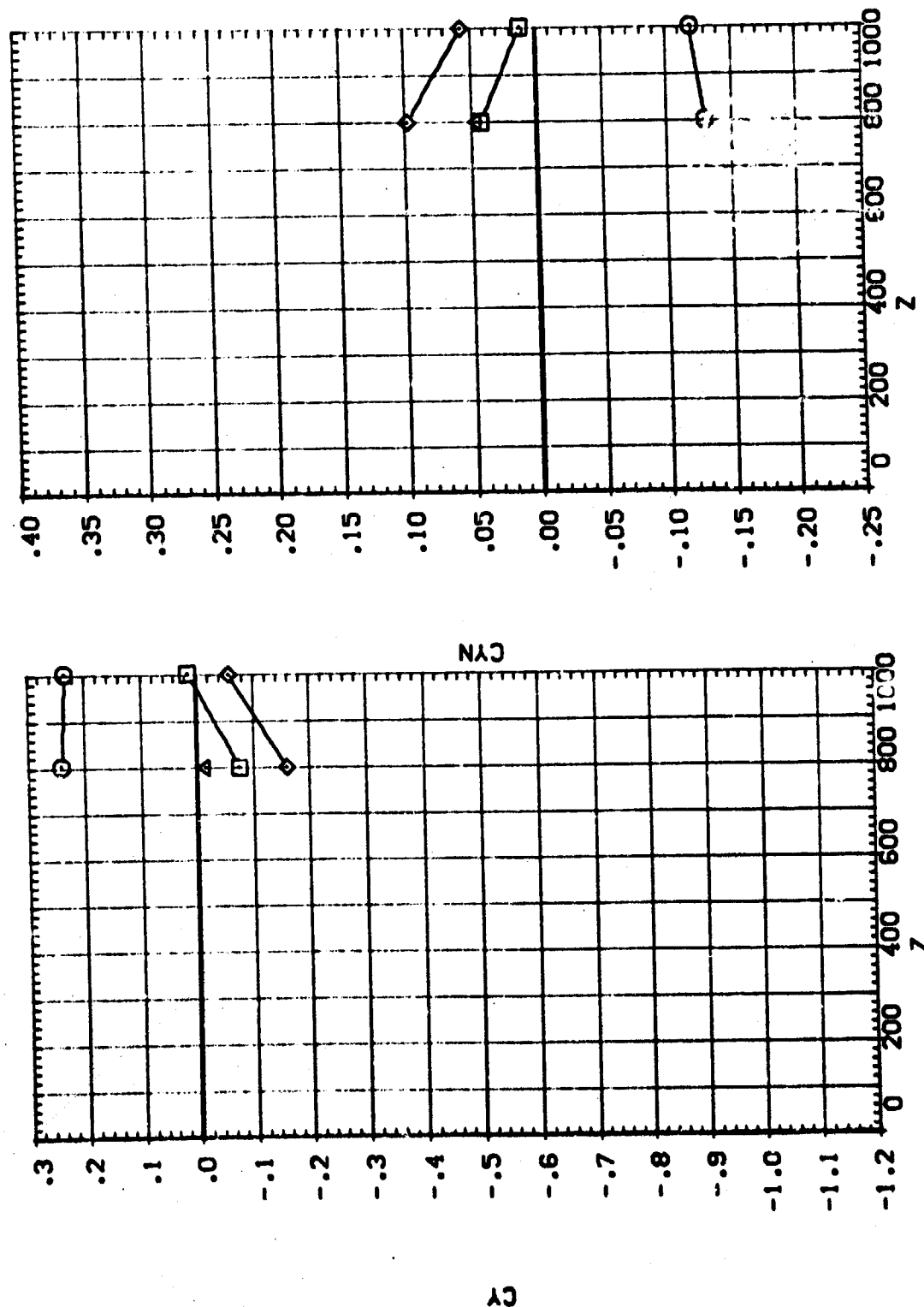


EFFECT OF SRB V/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ282)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

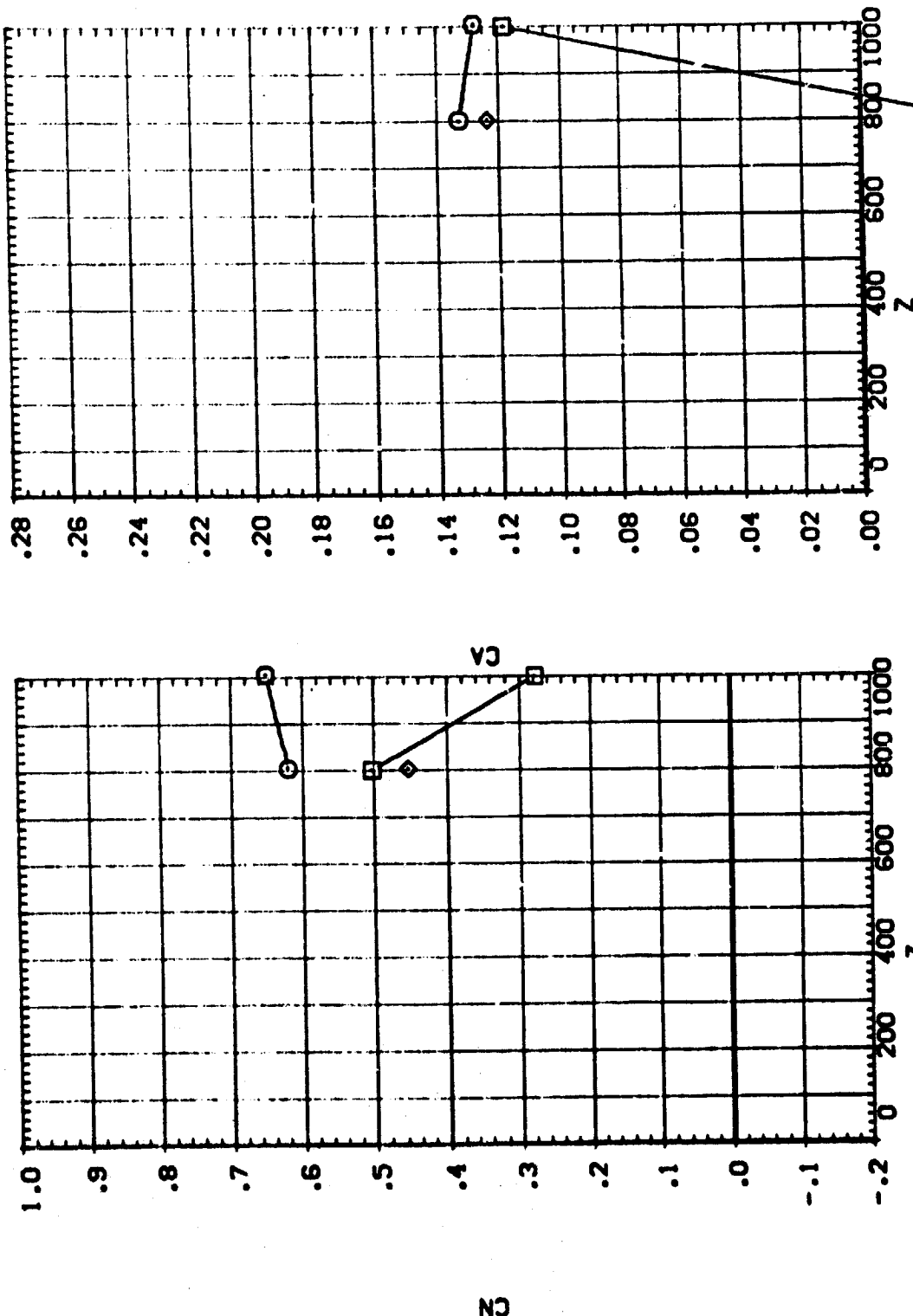
| SYMBOL | Y | WCH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 201.790 | ALPHA | .000 | BETA | -5.000 | |
| □ | 401.140 | DALPHA | -20.000 | LBETA | -10.000 | |
| ◇ | 795.900 | X | .300 | PC-HB | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ283)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATA SETS

| PARAMETRIC VALUES | |
|-------------------|-------|
| 200.750 | WCH |
| 400.670 | ALPHA |
| 799.560 | ALPHA |
| 4.510 | POTIL |
| .000 | BETA |
| -20.000 | DBETA |
| .000 | PC+PB |
| 28.900 | |
| -5.000 | |
| -20.000 | |
| 1500.000 | |

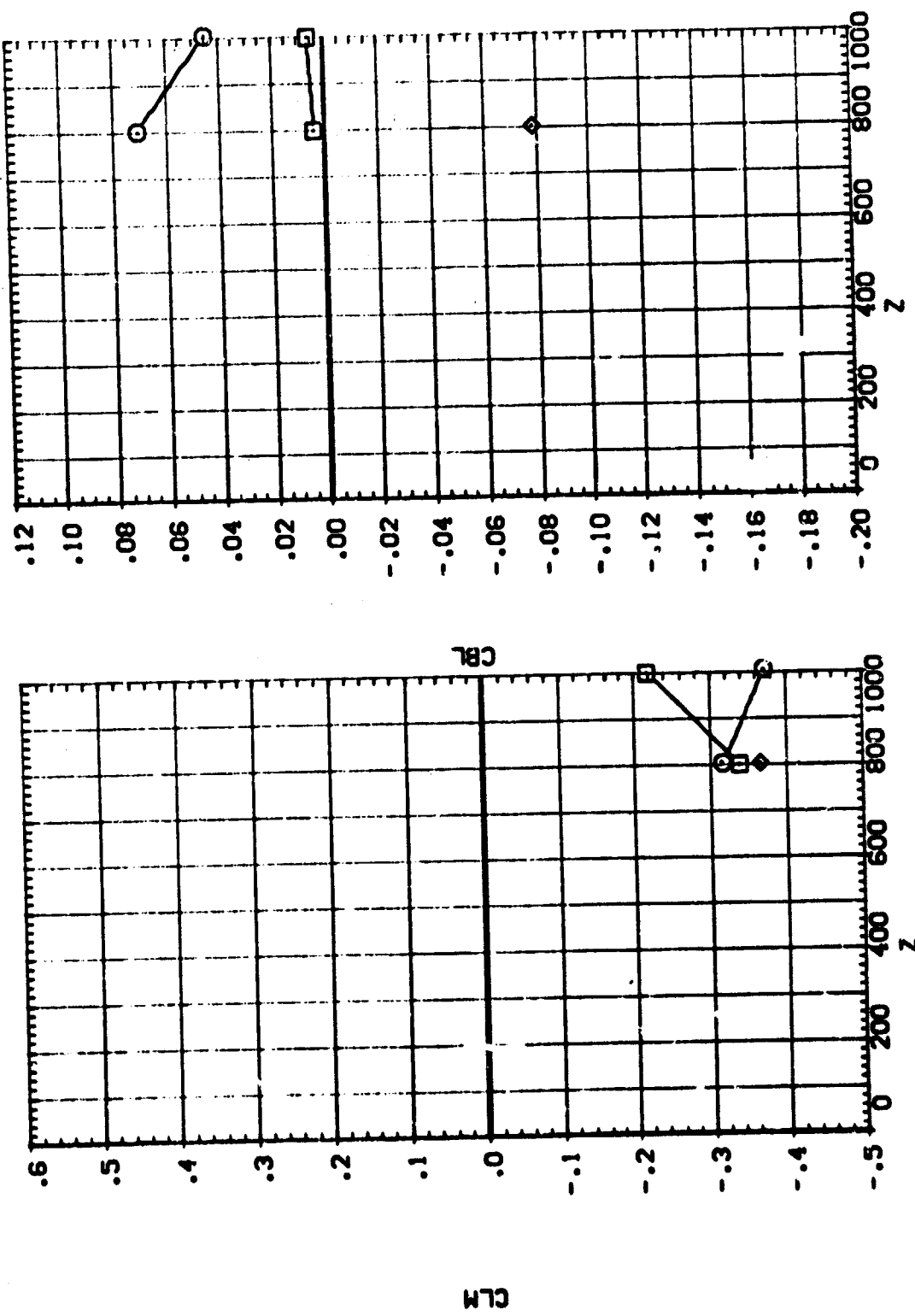


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13.SRB(SB)WITH PLUMES SEPARATING FROM 09T10 (RTJ283)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.750 | ALPHA | .000 | BETA | -5.000 | |
| □ | 400.620 | DAUP-A | -20.000 | DBETA | -20.000 | |
| ◇ | 799.950 | X | .000 | PC-MB | 1500.000 | |

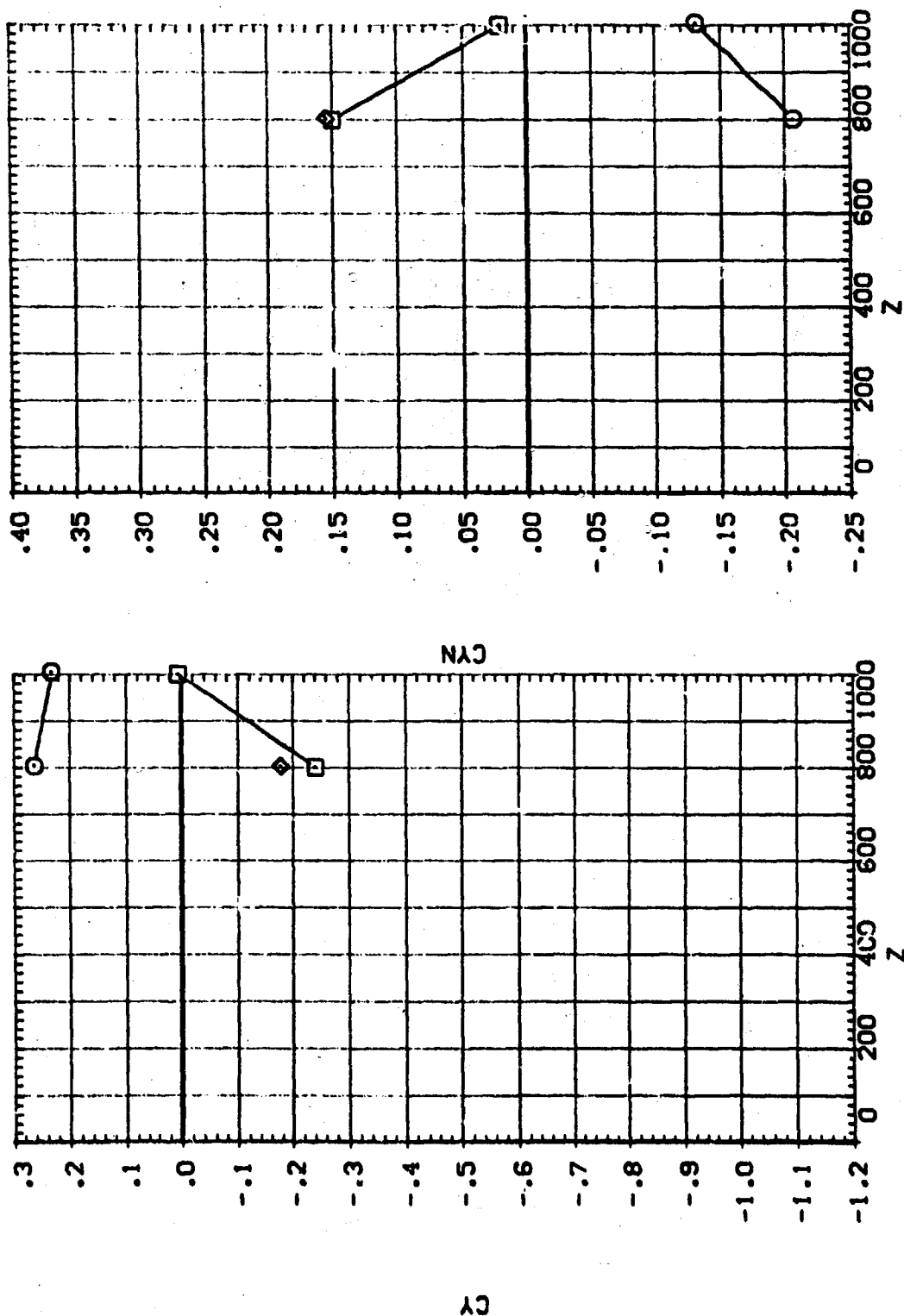


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ283)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|-------|
| 200.790 | MACH |
| 4.510 | PTOTL |
| 400.620 | BETA |
| 759.950 | DBETA |
| 1500.000 | PCH+B |
| 0.000 | X |

SYMBOL
○ □ ◇

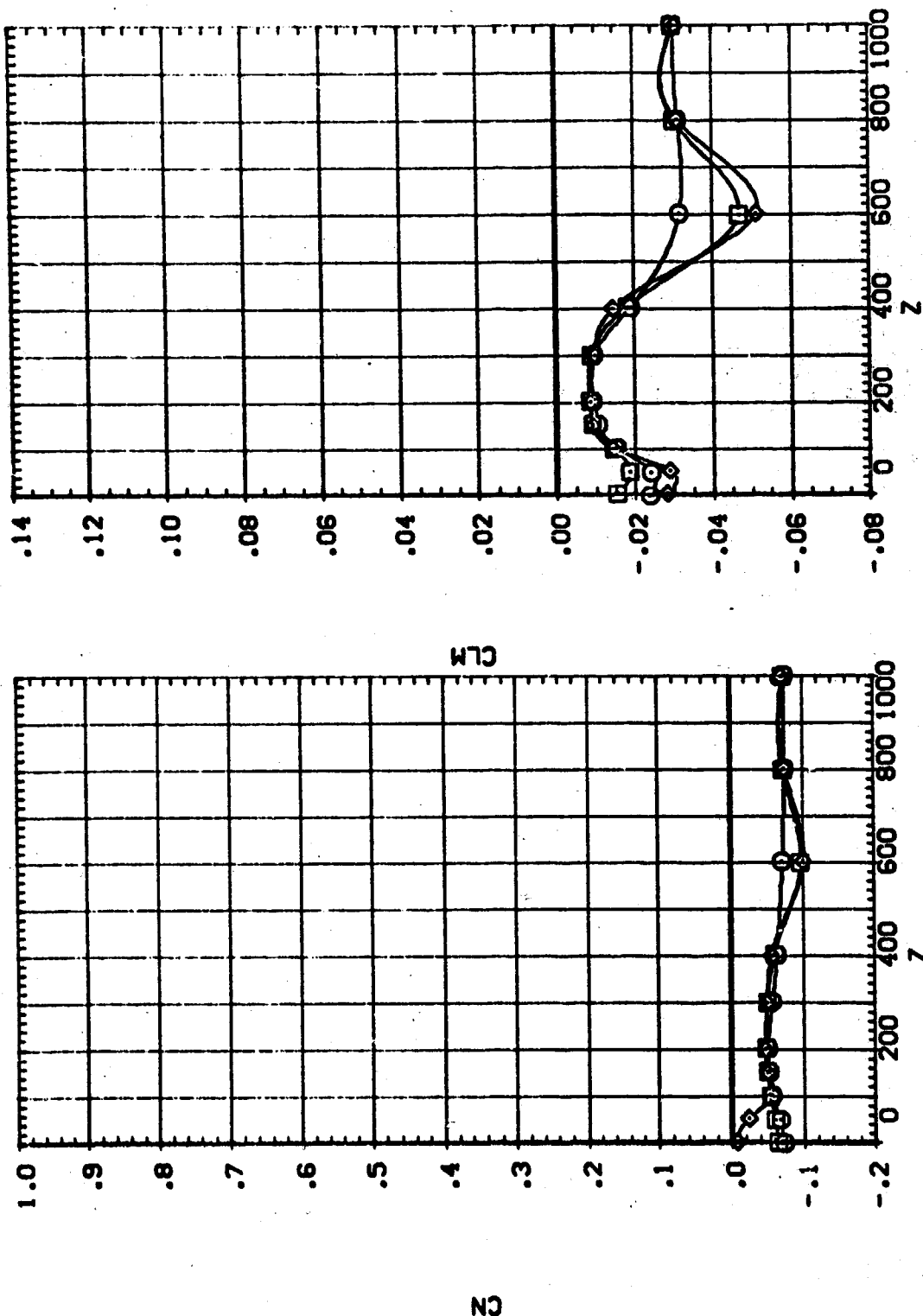


EFFECT OF SRB W/PLUMES SEPARATION ON ORB/ET AERODYNAMIC CHARACTERISTICS

IA13-SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ300)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYM-BOL | X | PARAMETRIC VALUES | | | |
|------------|---------|-------------------|------|----------|----------|
| | | MACH | PTC | α | |
| \square | 300.230 | ALPHA | .000 | BETA | .000 |
| \diamond | 600.430 | DALPHA | .000 | DBETA | .000 |
| | | Y | .000 | PO+PR | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ300)

SYMBOL

X

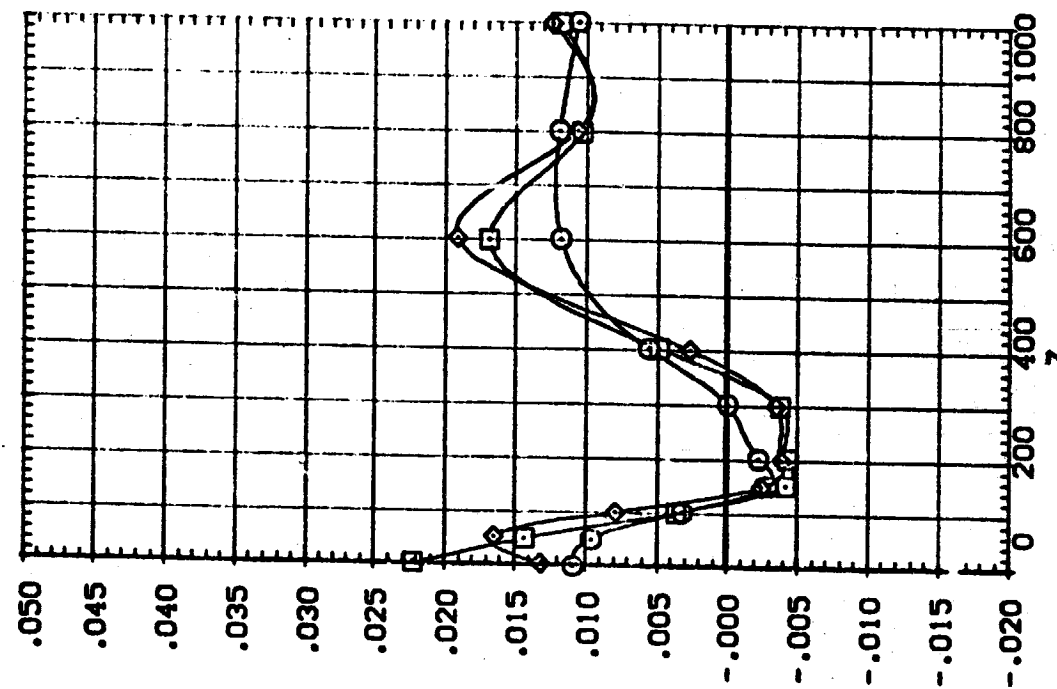
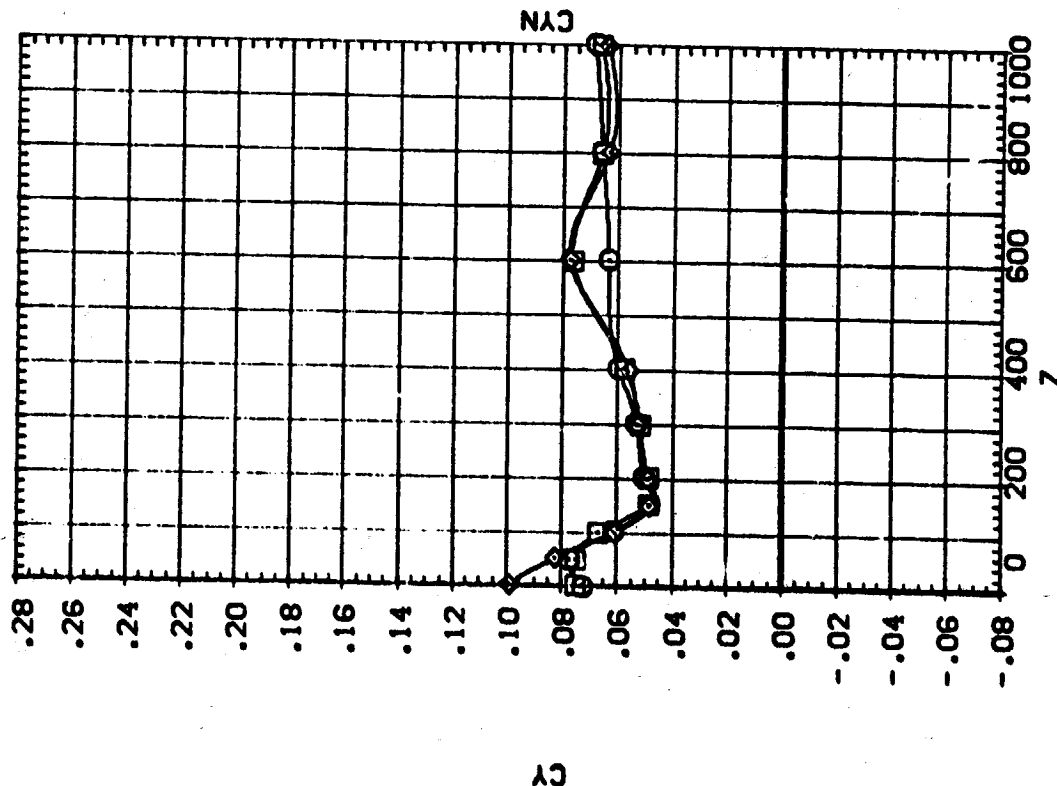
□

◇

PARAMETRIC VALUES

| | | |
|---------|--------|----------|
| MACH | PTOTAL | 11.600 |
| 300.230 | BETA | .000 |
| 600.430 | DBETA | .000 |
| Y | PC+PR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

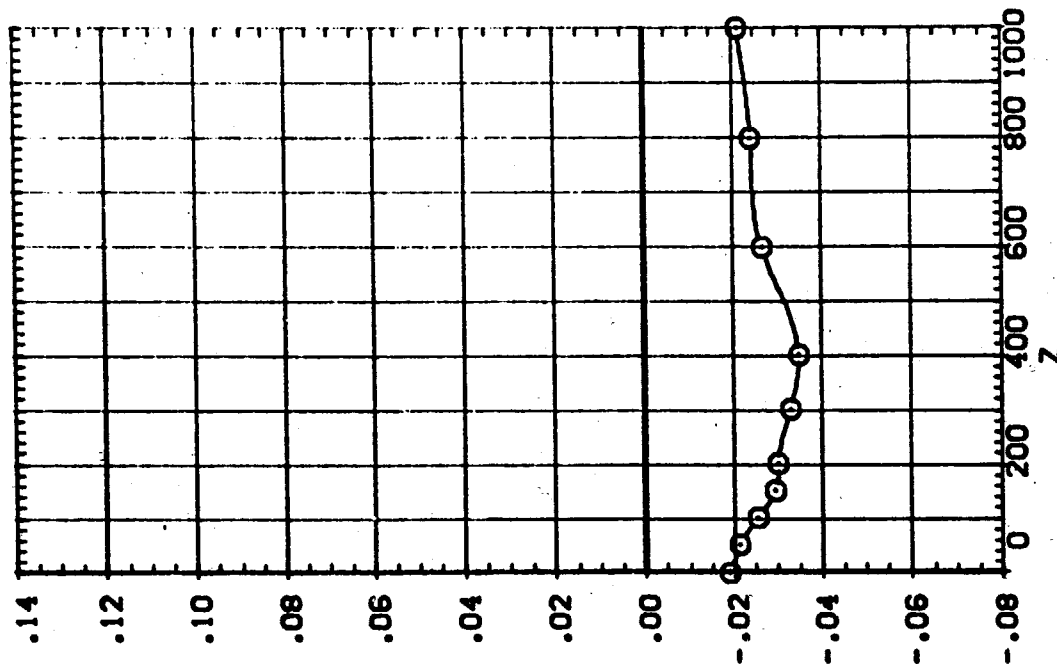
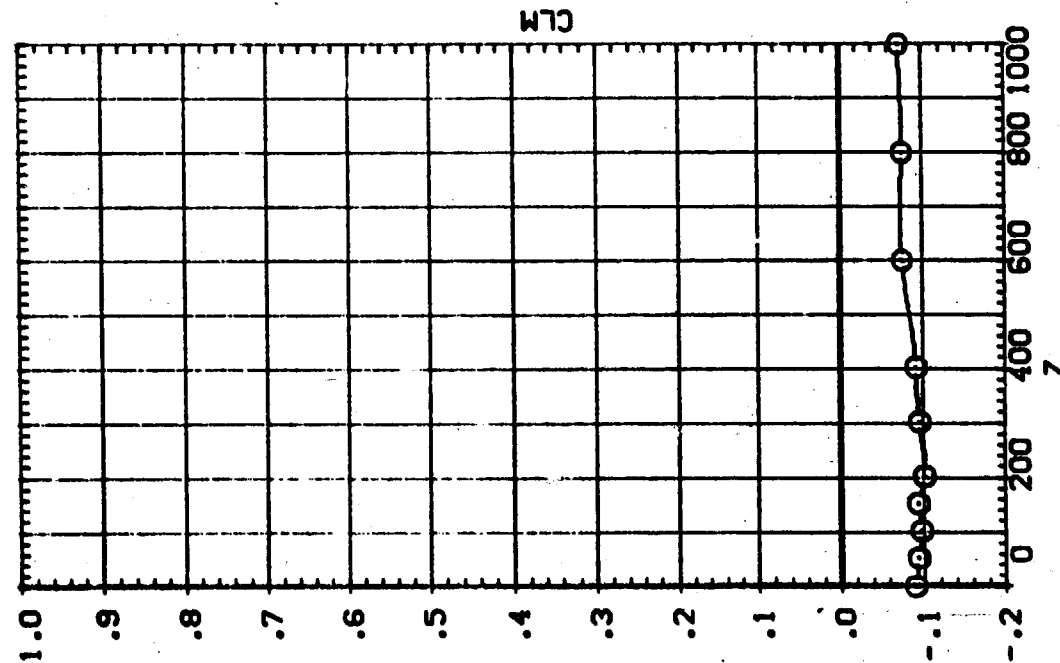
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ301)

SYMBOL X
O 559.510

PARAMETRIC VALUES
4.480 PTOTAL 10.800
.000 BETA .000
200.000 DBETA .000
1500.000 PO-PR

MACH
ALPHA
DALPHA
Y

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ301)

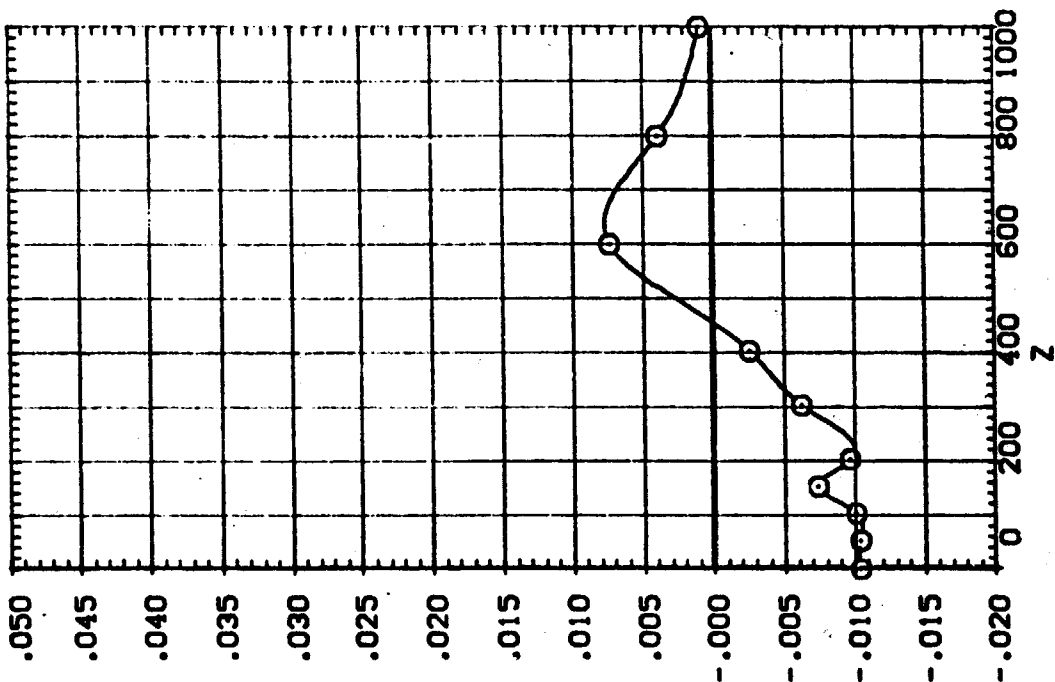
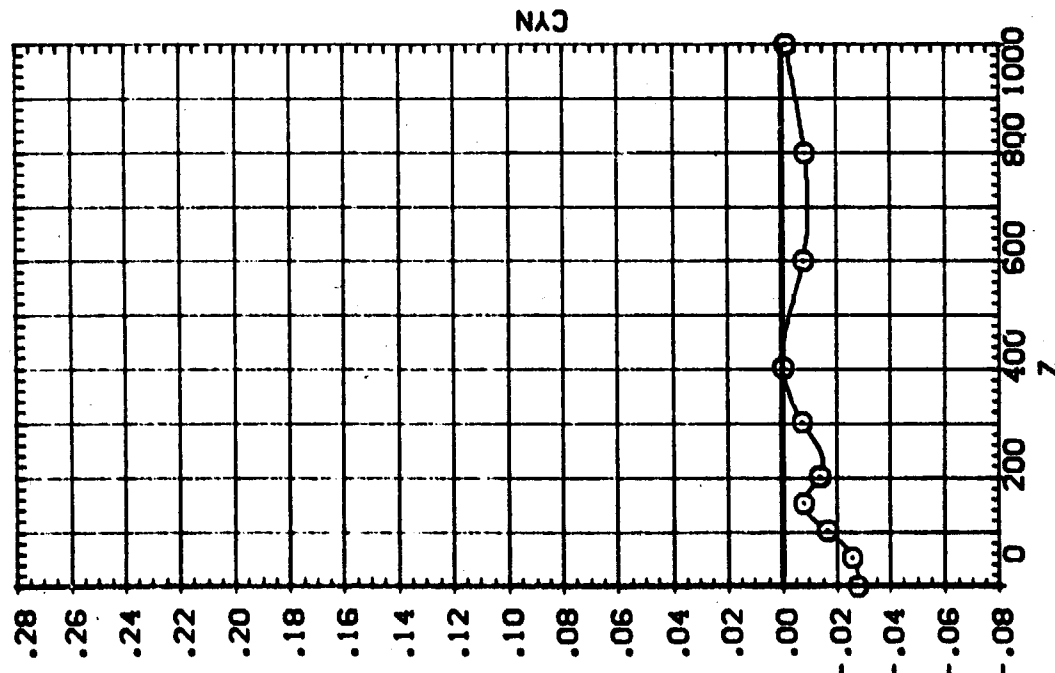
SYMBOL
O

X
599.510

PARAMETRIC VALUES

| MOCH | PIOTAL | 10.800 |
|--------|--------|----------|
| ALPHA | BETA | .000 |
| DALPHA | DBETA | .000 |
| Y | PC+PR | 1500.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

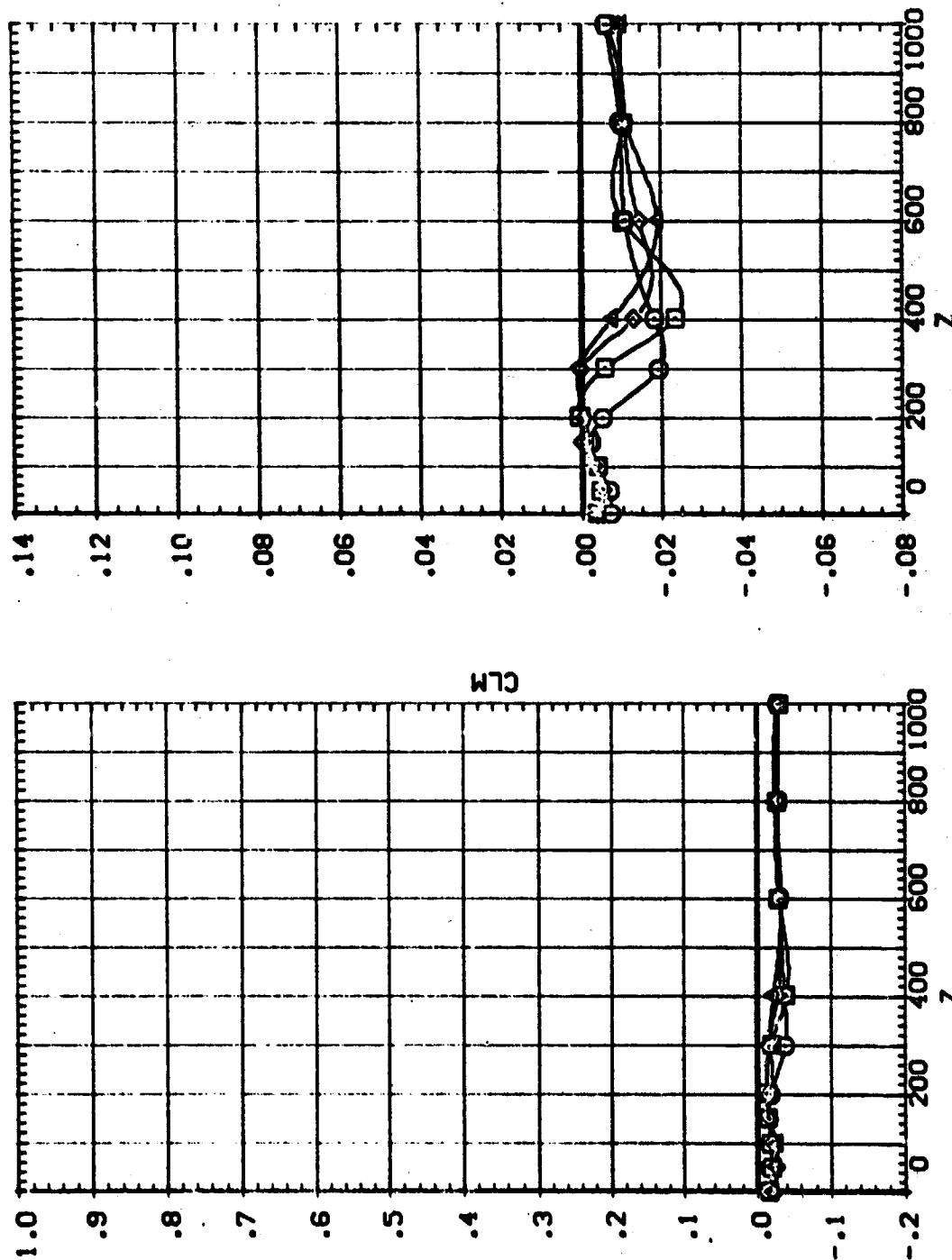


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ302)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|--------|
| | | MACH | PTOTAL | BETA | PC-HSR |
| ○ | .257 | 4.510 | 29.000 | .000 | .000 |
| □ | 300.320 | .000 | .000 | .000 | .000 |
| ◇ | 500.490 | .000 | .000 | .000 | .000 |
| △ | 900.670 | .000 | .000 | .000 | .000 |



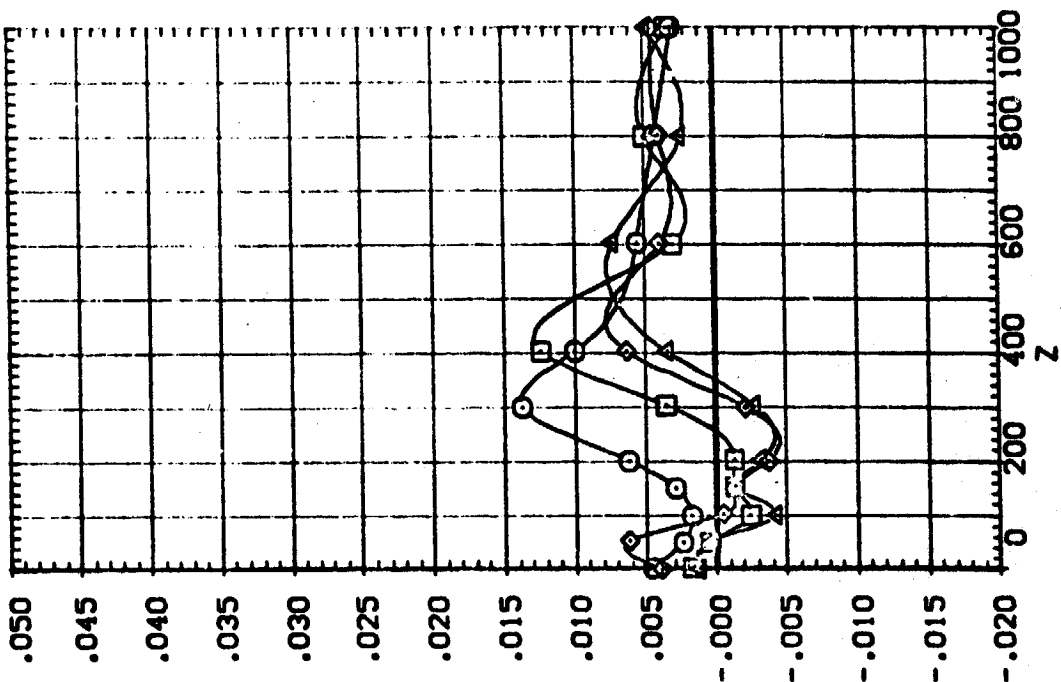
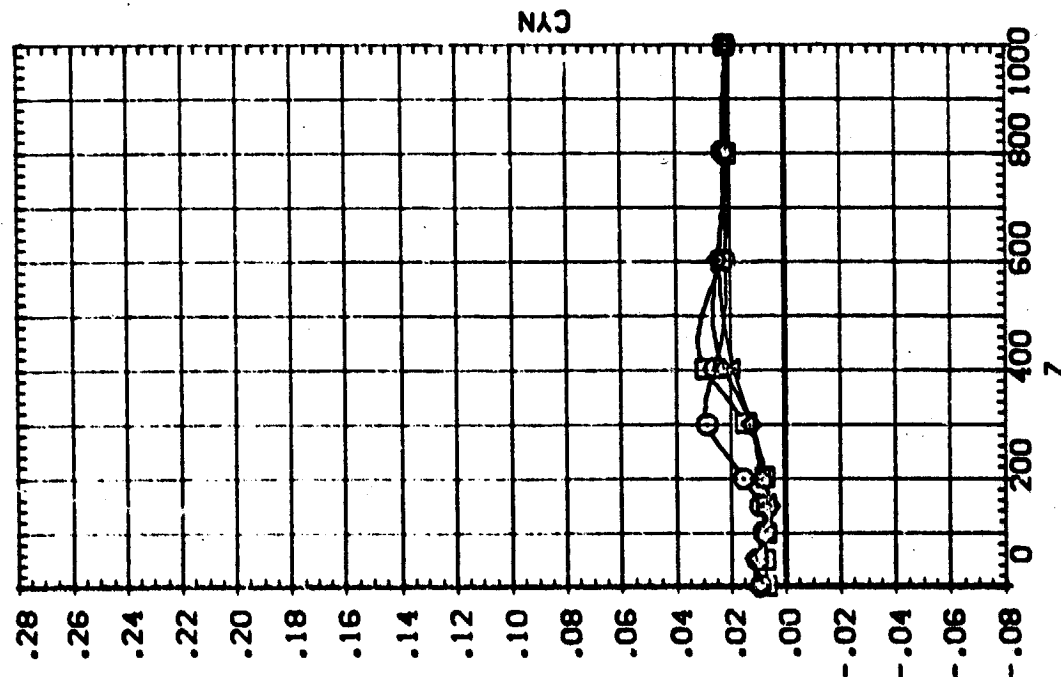
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | BETA | DBETA | POWR |
|---------|------|--------|------|-------|---------|
| 300.320 | .257 | 4.510 | .000 | .000 | 29.000 |
| 600.490 | .000 | .000 | .000 | .000 | .000 |
| 900.670 | .000 | .000 | .000 | .000 | 750.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

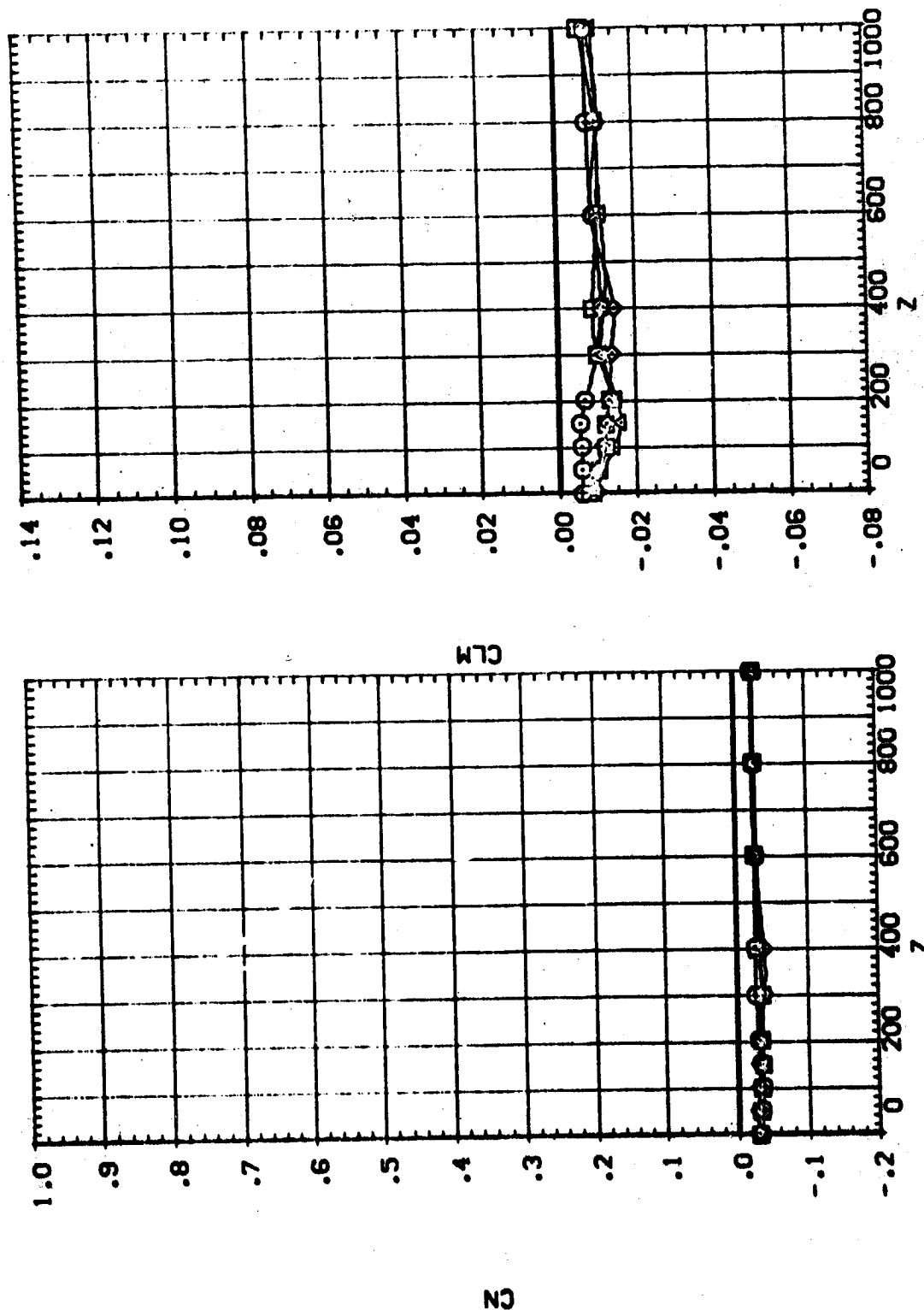


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ303)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

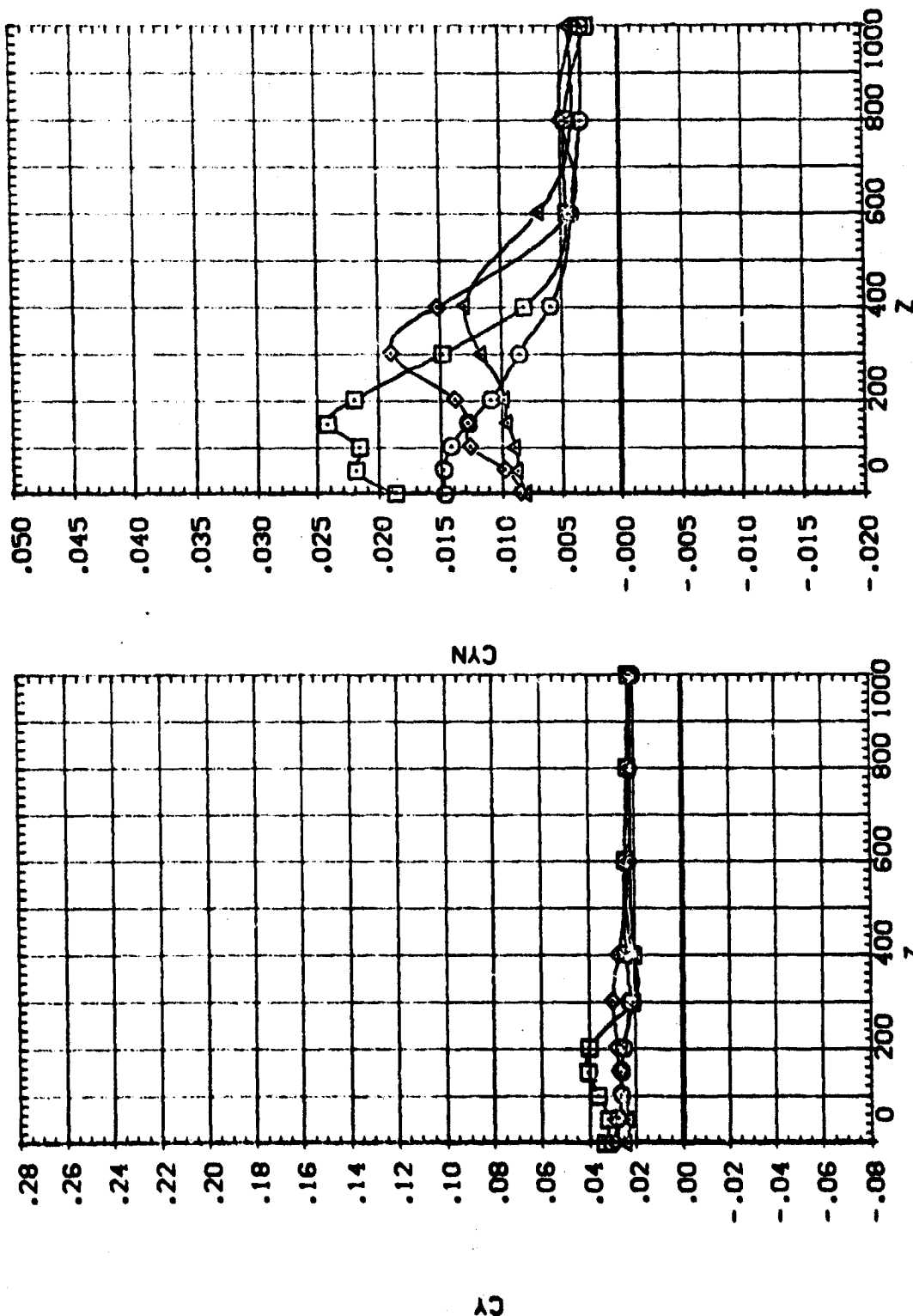
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|---------|
| | | MACH | 4.510 | PITOTAL | 29.000 |
| □ | 300.260 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.530 | DALPHA | .000 | DBETA | .000 |
| △ | 900.610 | Y | 200.000 | POWER | 750.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ303)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|---------|-------------------|---------|------|--------|
| | | | 4.510 | PTOTAL | BETA | PO-MBR |
| ○ | .202 | 300.260 | .000 | .000 | .000 | 29.000 |
| □ | .600 | 530 | .000 | .000 | .000 | .000 |
| ◇ | 900.610 | Y | 200.000 | 750.000 | | |

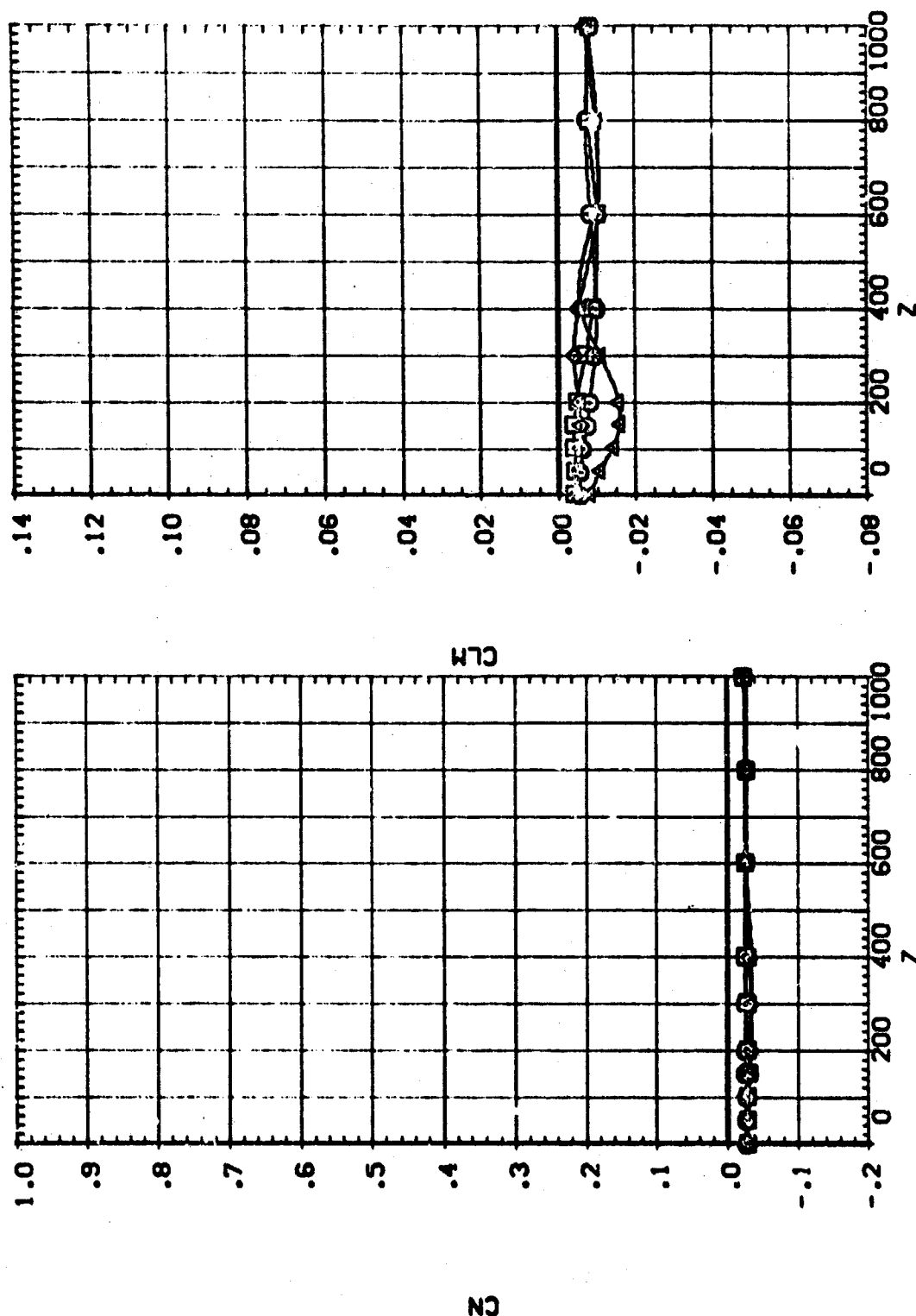


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ304)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | X | | MACH | | PARAMETRIC VALUES | | | |
|--------|---|---------|------|---------|--------|-------------------|--|--|--|
| □ | ○ | 300.300 | .250 | 4.510 | PTOTAL | 29.000 | | | |
| ◇ | ○ | 600.470 | .300 | .000 | BETA | .000 | | | |
| △ | ○ | 900.500 | .470 | .000 | DBETA | .000 | | | |
| | | | | 400.000 | POWER | 750.000 | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

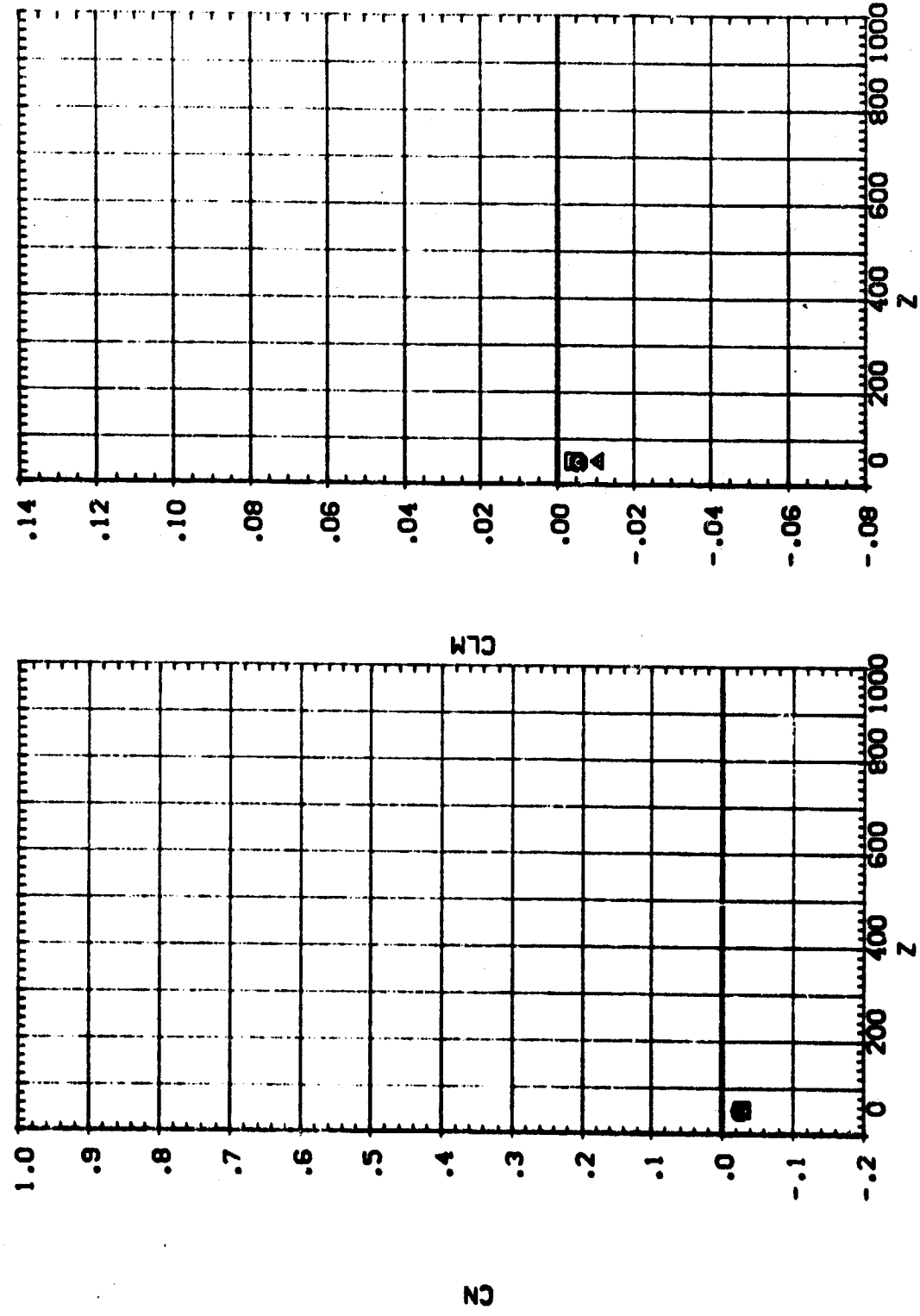


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ305)

SYMBOL X
○ □ ◇ △

| PARAMETRIC VALUES | | | |
|-------------------|---------|--------|---------|
| MACH | 4.510 | PTOTAL | 29.000 |
| ALPHA | .000 | BETA | .000 |
| DALPHA | .000 | DBETA | .000 |
| Y | 800.000 | PDHBR | 750.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

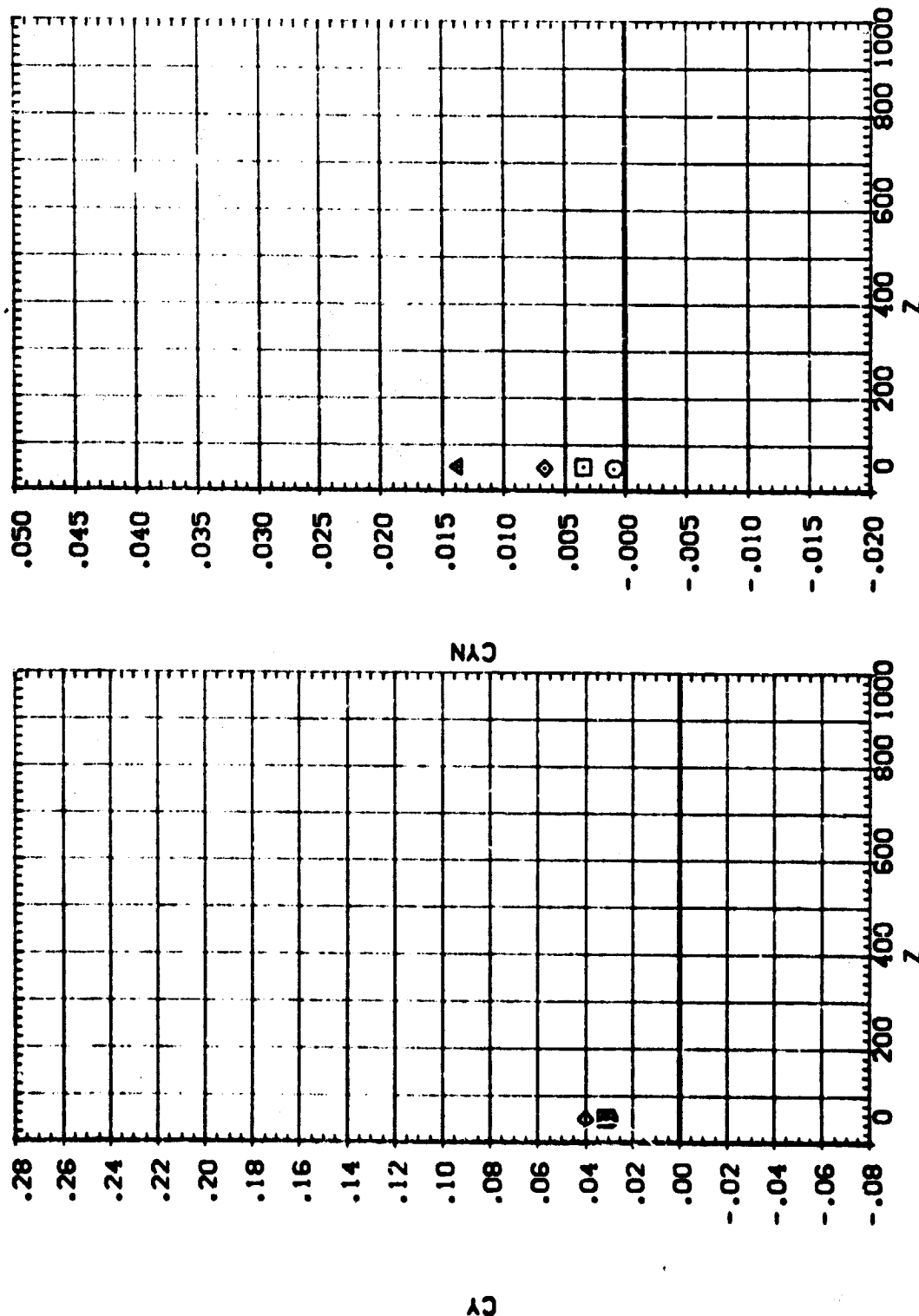


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ305)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | PIOTAL | 29.000 |
|--------|---------|--------|-------------------|--------|---------|
| ○ | .224 | ALPHA | .000 | BETA | .000 |
| □ | 300.320 | DALPHA | .000 | DBETA | .000 |
| ◇ | 600.420 | Y | 800.000 | PO-455 | 750.000 |
| △ | 900.540 | | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

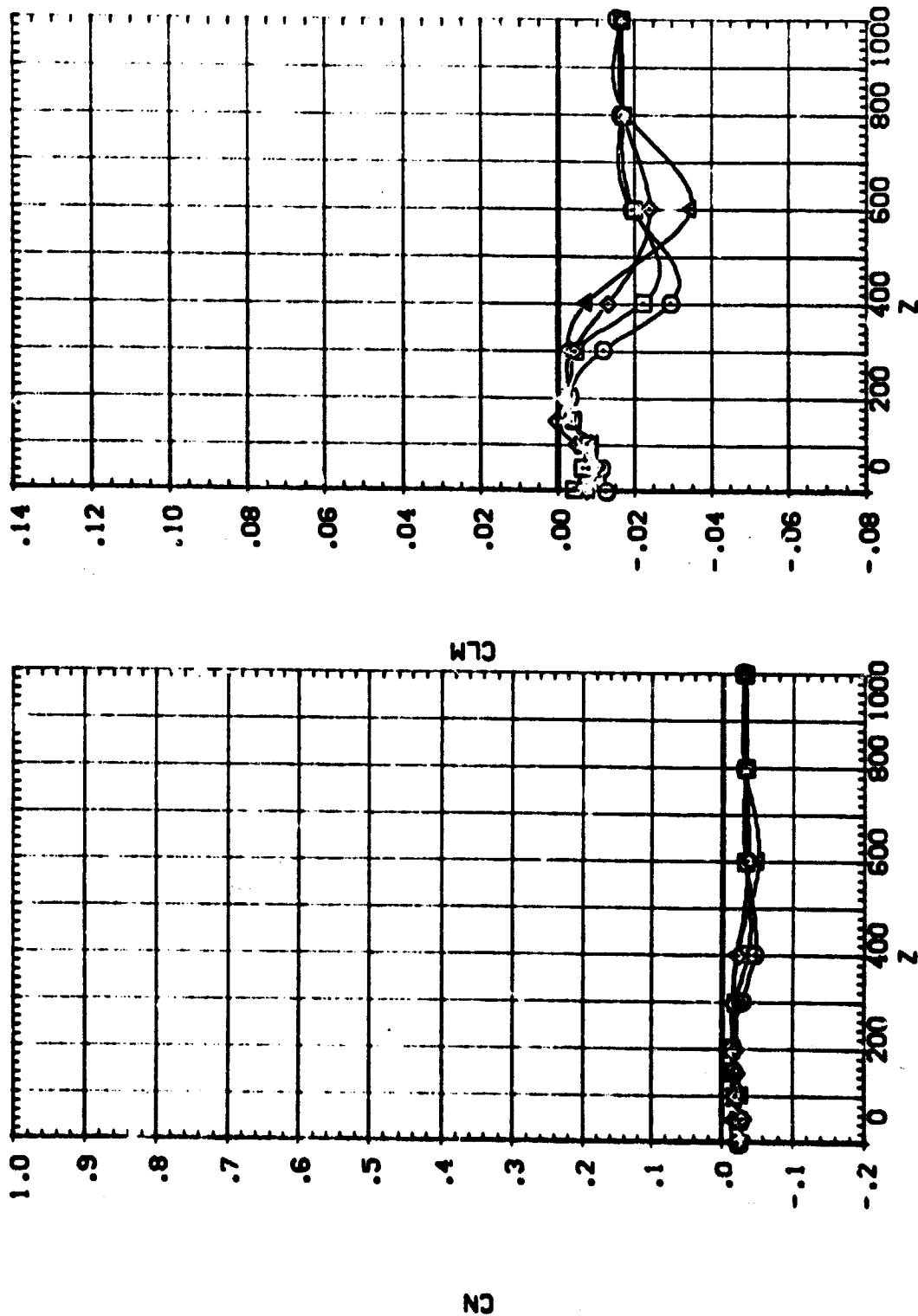


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ306)

SYMBOL

| X | PARAMETRIC VALUES | | | |
|---------|-------------------|--------|------|----------|
| | MACH | PTOTAL | SETA | POWBR |
| 300.180 | .000 | 29.000 | .000 | |
| 600.640 | .000 | .000 | .000 | |
| 900.700 | .000 | .000 | .000 | 1500.000 |

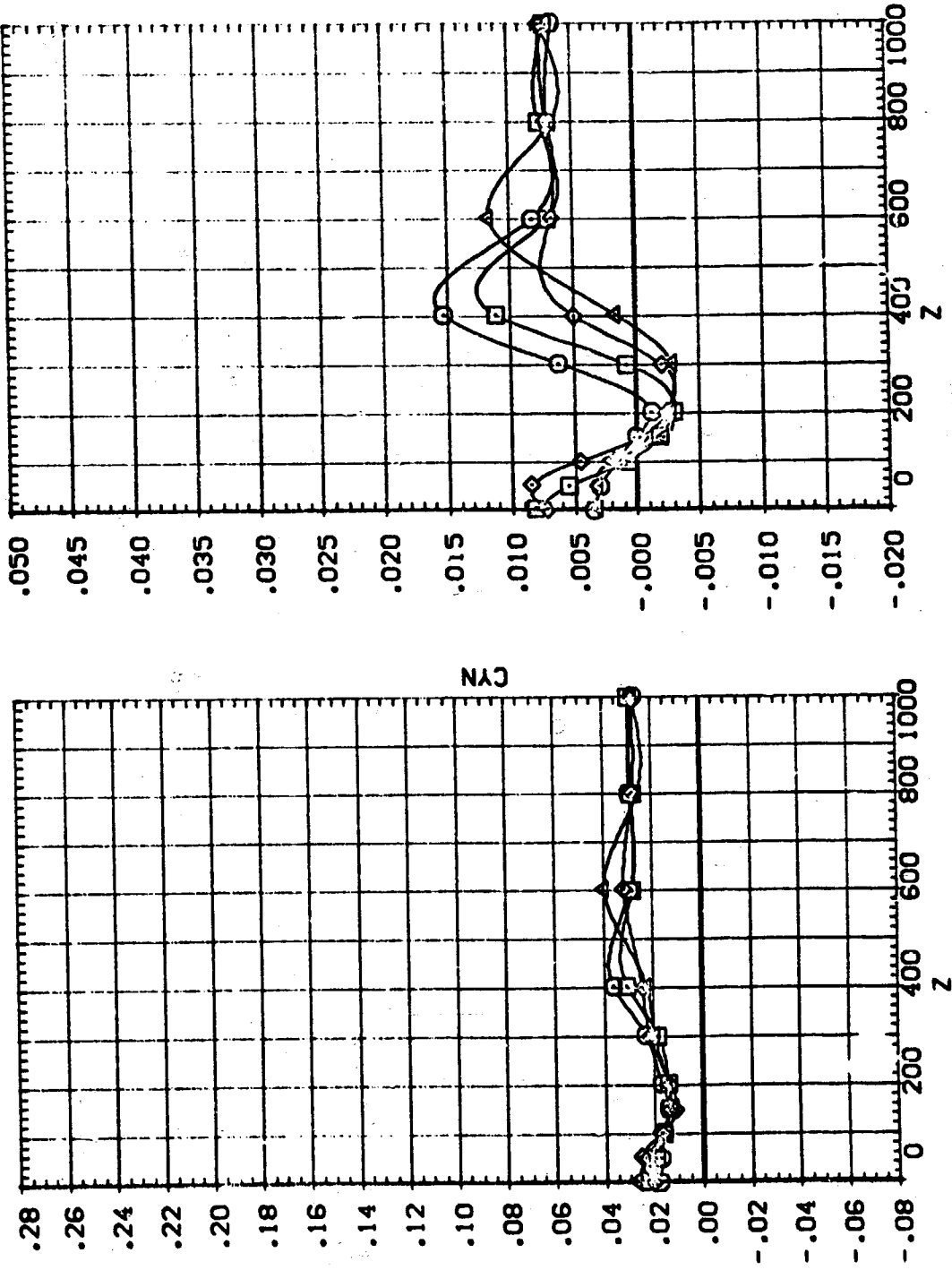
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | PTOTAL | 29.000 | |
| ○ | 300.180 | ALPHA | .000 | BETA | .000 | |
| □ | 600.640 | DALPHA | .000 | DBETA | .000 | |
| ◇ | 900.700 | Y | .000 | PCHGR | 1500.000 | |

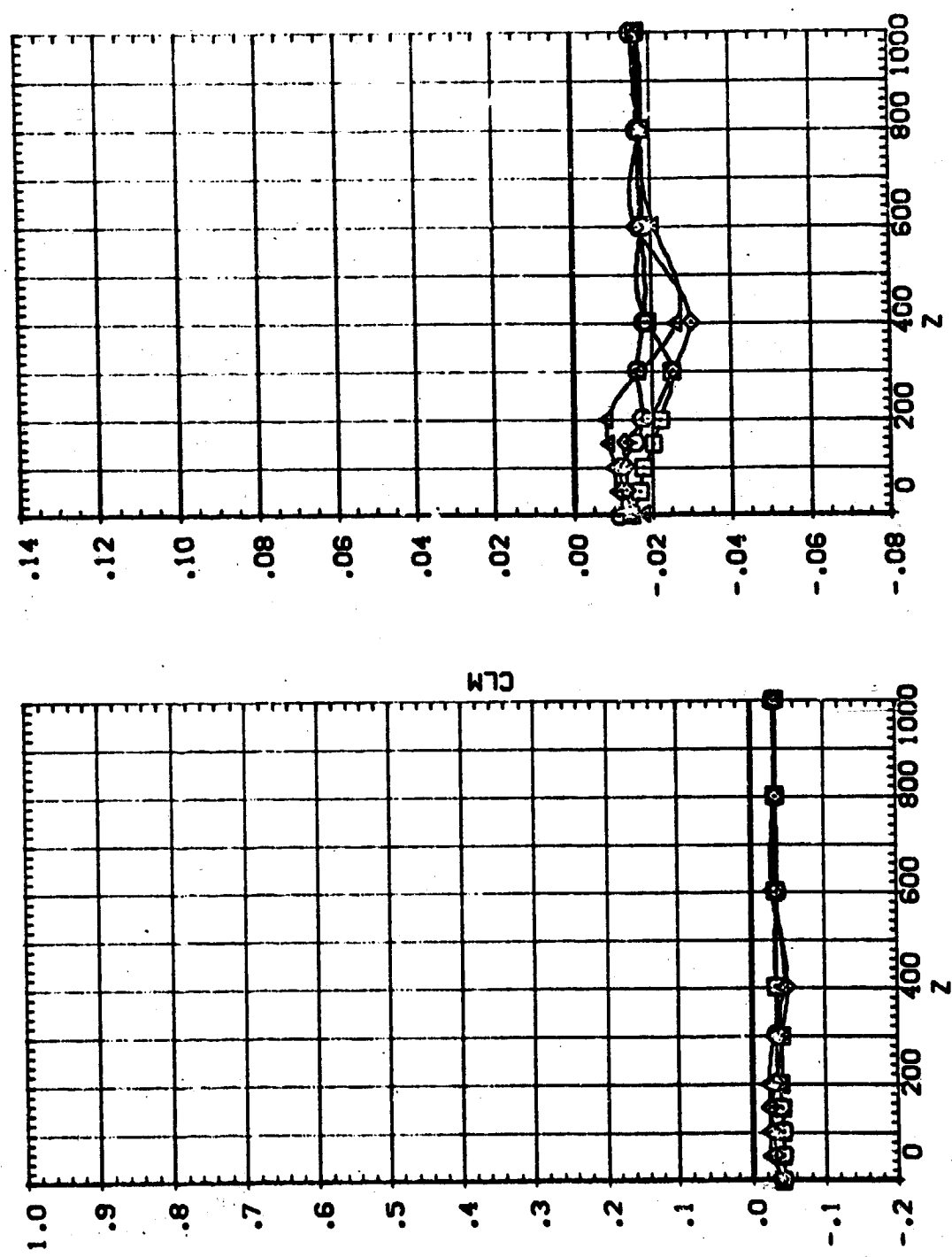


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ307)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYM | X | PARAMETRIC VALUES | | | |
|-----|---------|-------------------|---------|------|----------|
| | | MACH | PTOTAL | BETA | PCWBR |
| □ | 300.330 | .239 | 4.510 | .000 | 29.000 |
| ◇ | 600.450 | ALPHA | .000 | .000 | .000 |
| △ | 900.580 | DALPHA | 200.000 | .000 | 1500.000 |
| | | Y | | | |



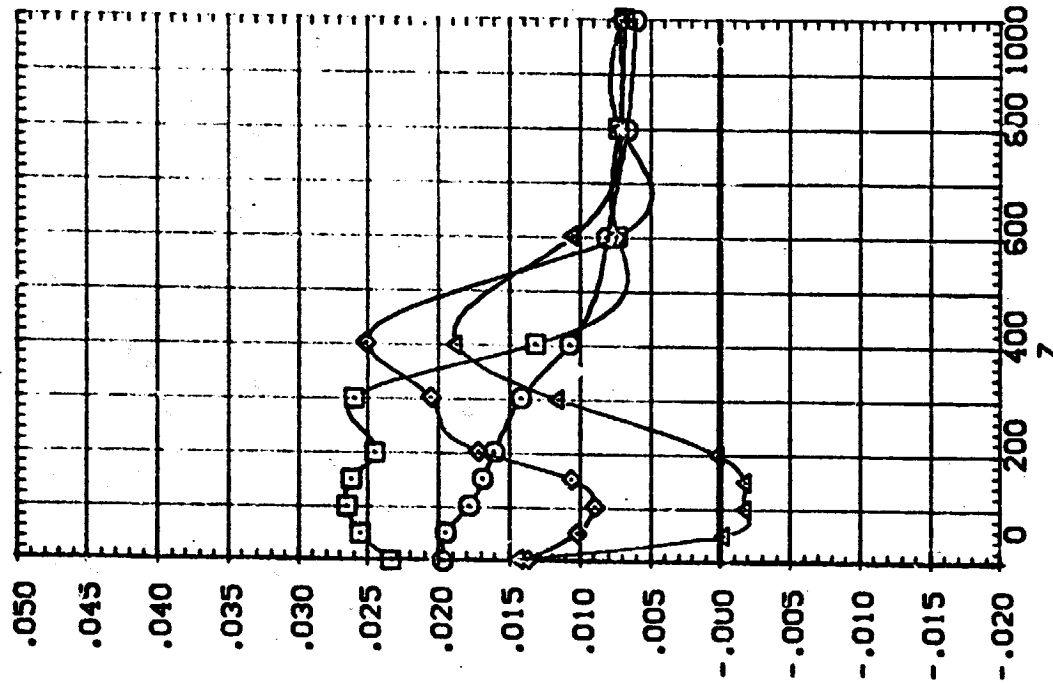
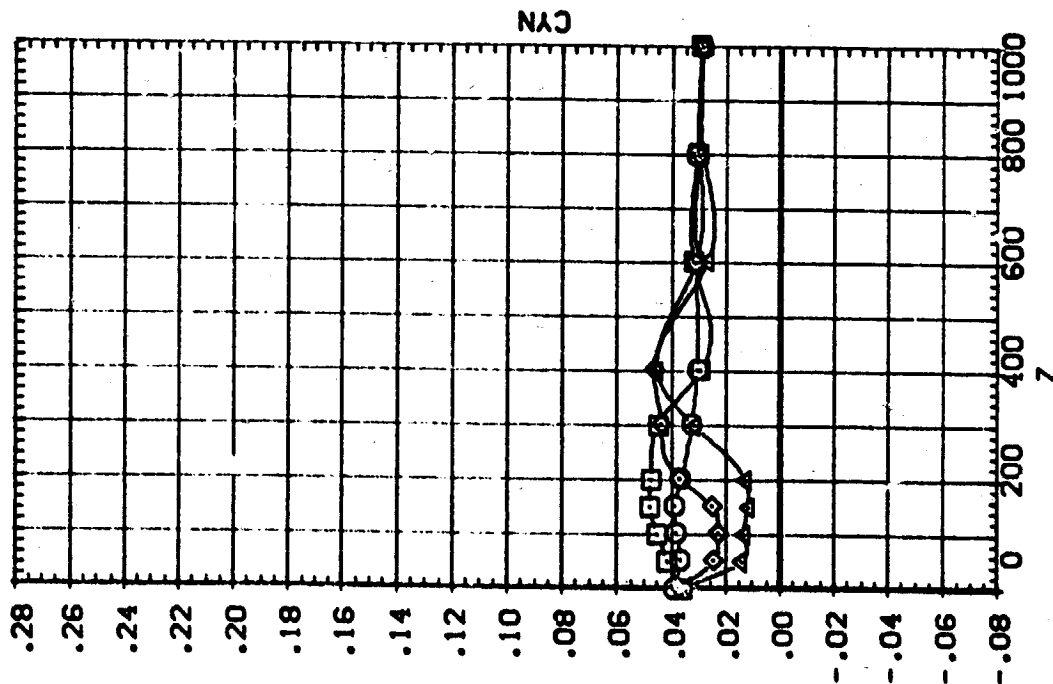
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | BETA | DBETA | PC+PR |
|---------|---------|---------|---------|---------|----------|
| .239 | 4.510 | 29.000 | .000 | .000 | 1500.000 |
| 302.330 | .000 | .000 | .000 | .000 | |
| 600.450 | .000 | .000 | .000 | .000 | |
| 900.530 | 200.000 | 200.000 | 200.000 | 200.000 | 200.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

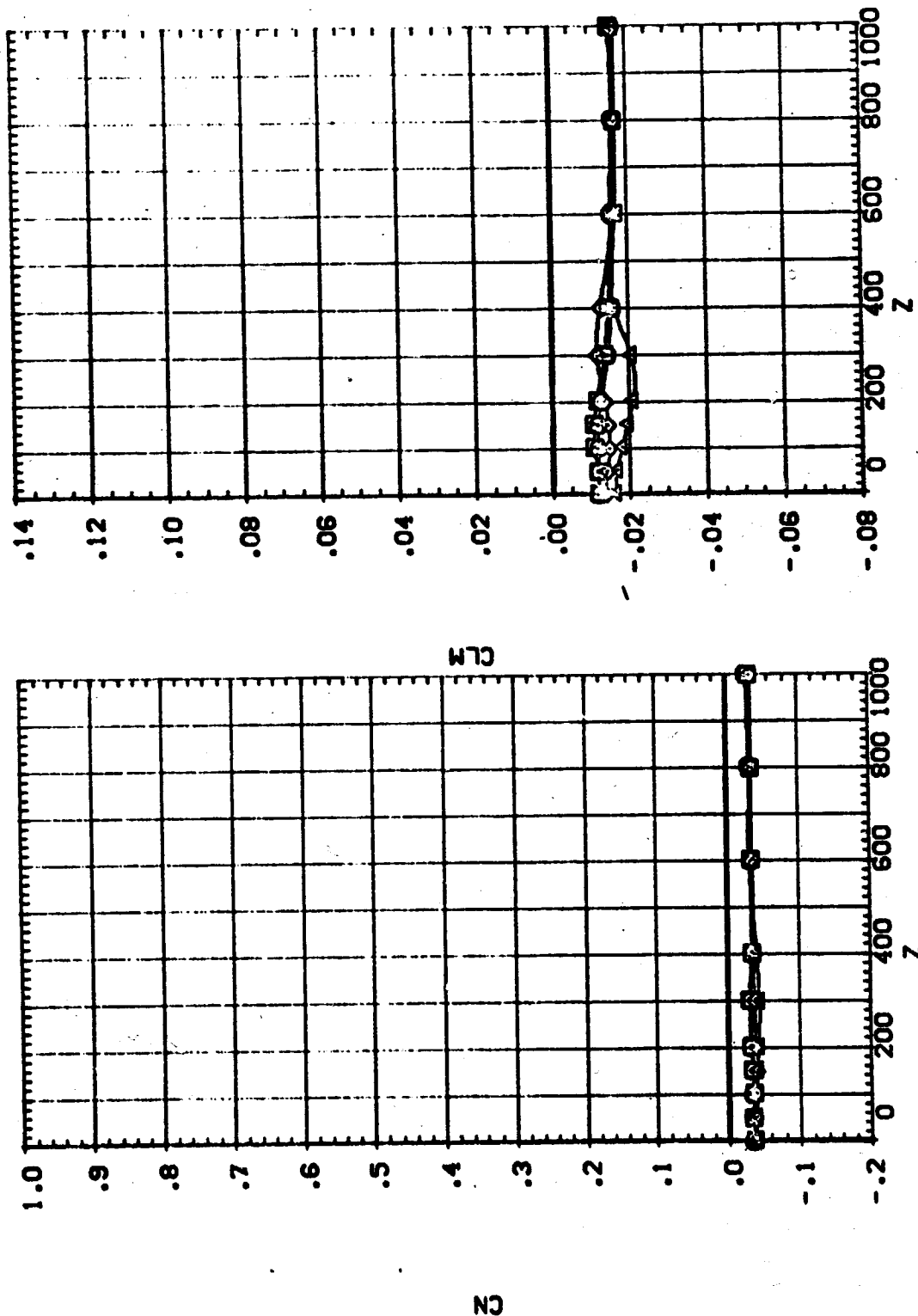


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ308)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| □ | .187 | 4.510 | PTOTAL 29.000 |
| ◇ | 300.400 | .000 | BETA .000 |
| △ | 600.500 | .000 | DBETA .000 |
| | 900.450 | 400.000 | PO+PR 1500.000 |

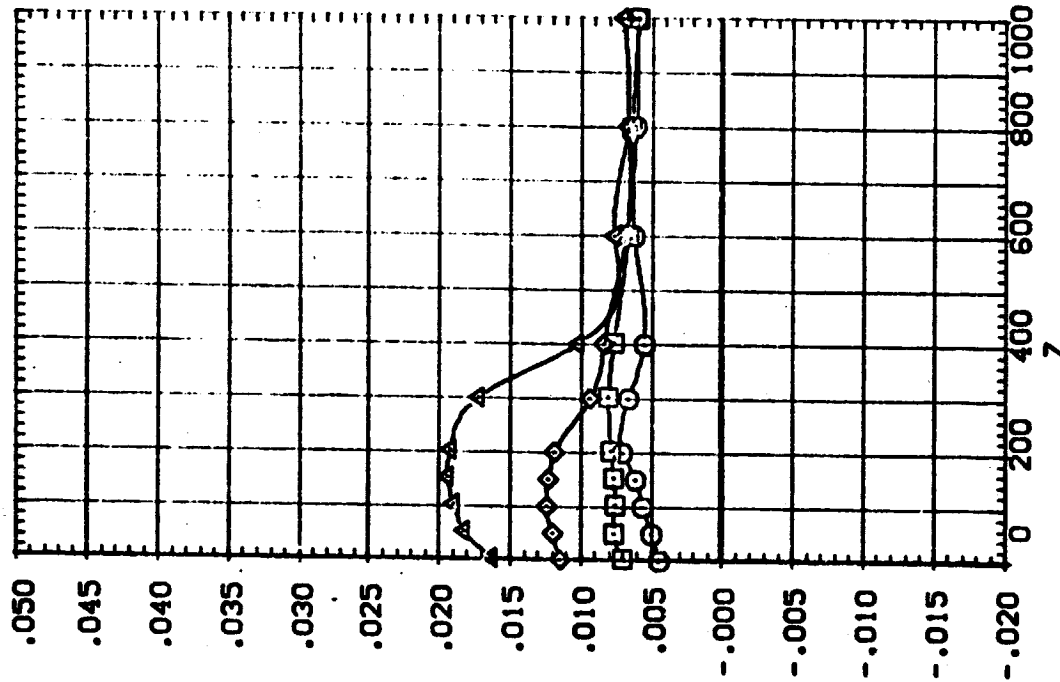
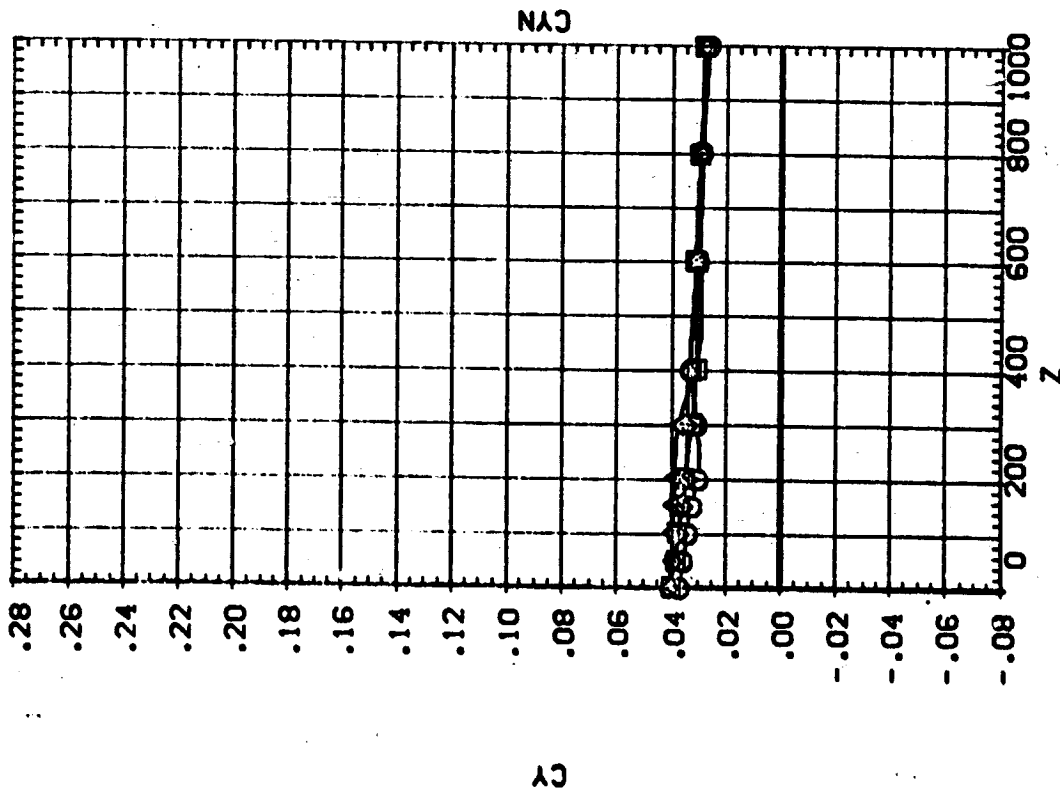


SYMBOL

X

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .187 | 4.510 | PTOTAL 29.000 |
| □ | 300.400 | .000 | BETA .000 |
| ◇ | 600.500 | .000 | DBETA .000 |
| △ | 900.490 | 400.000 | PC+PER 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

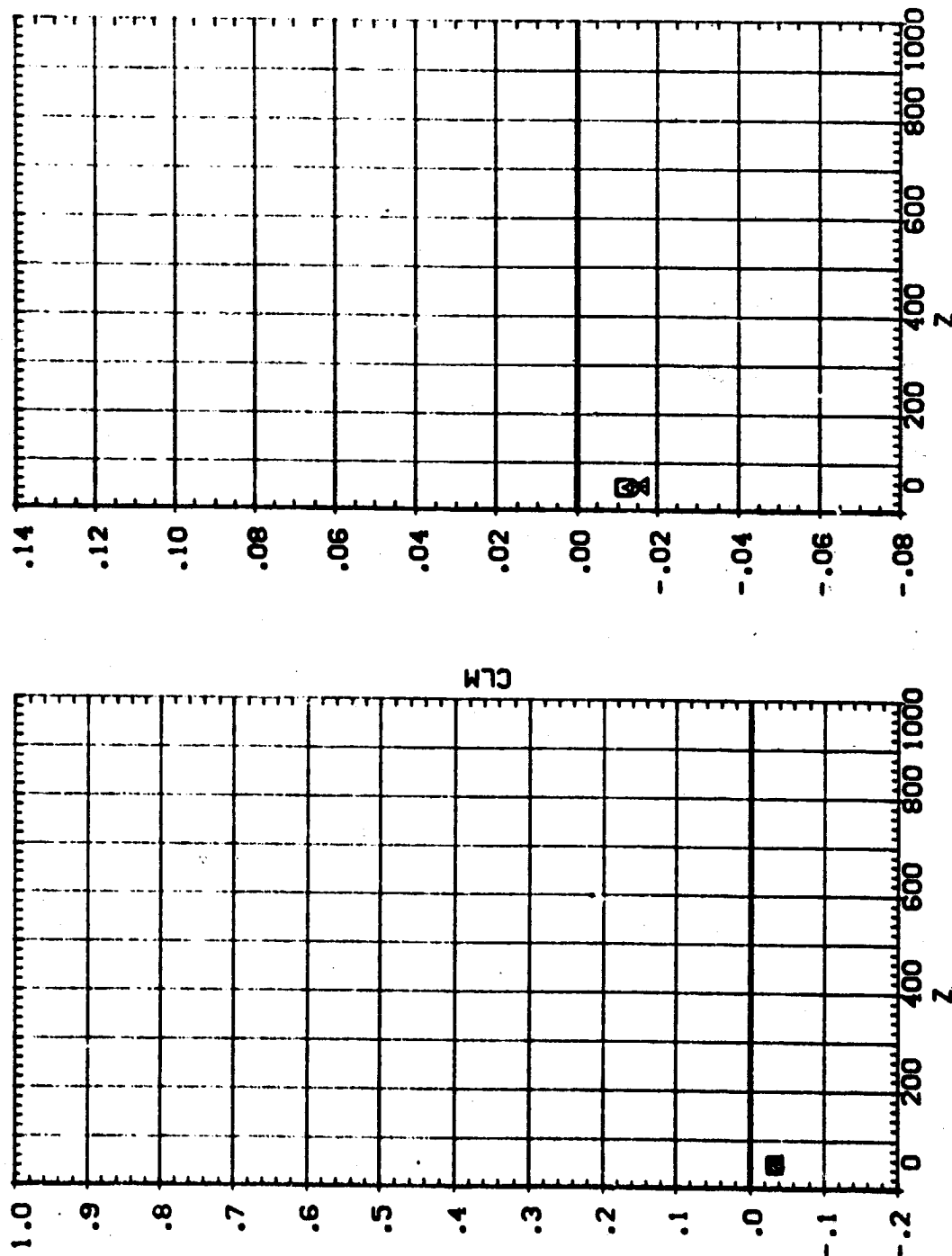
IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ309)

SYMBOL

○ □ ◇ △

| X | PARAMETRIC VALUES | | | |
|---------|-------------------|---------|--------|----------|
| | MACH | 4.510 | PTOTAL | 29.000 |
| 300.390 | ALPHA | .000 | BETA | .000 |
| 600.390 | DALPHA | .000 | DBETA | .000 |
| 900.720 | Y | 800.000 | PC+PR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SRB

X

.244

300.390

600.390

900.720

MAOH

ALPHA

DELTA

Y

PTOTAL

BETA

DBETA

POWER

29.000

.000

.000

1500.000

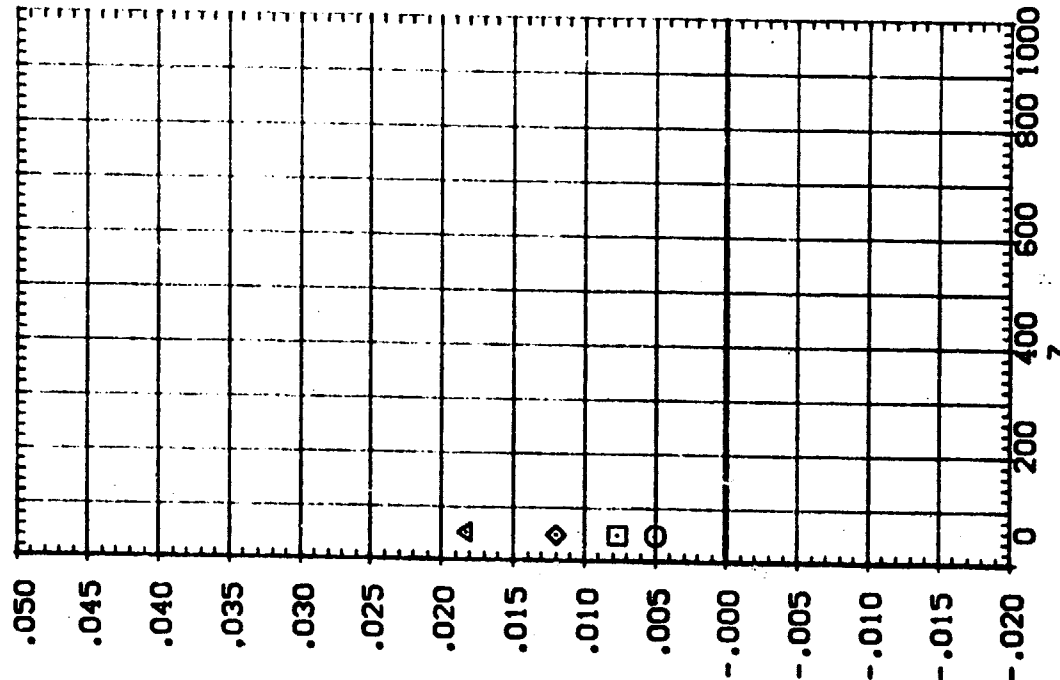
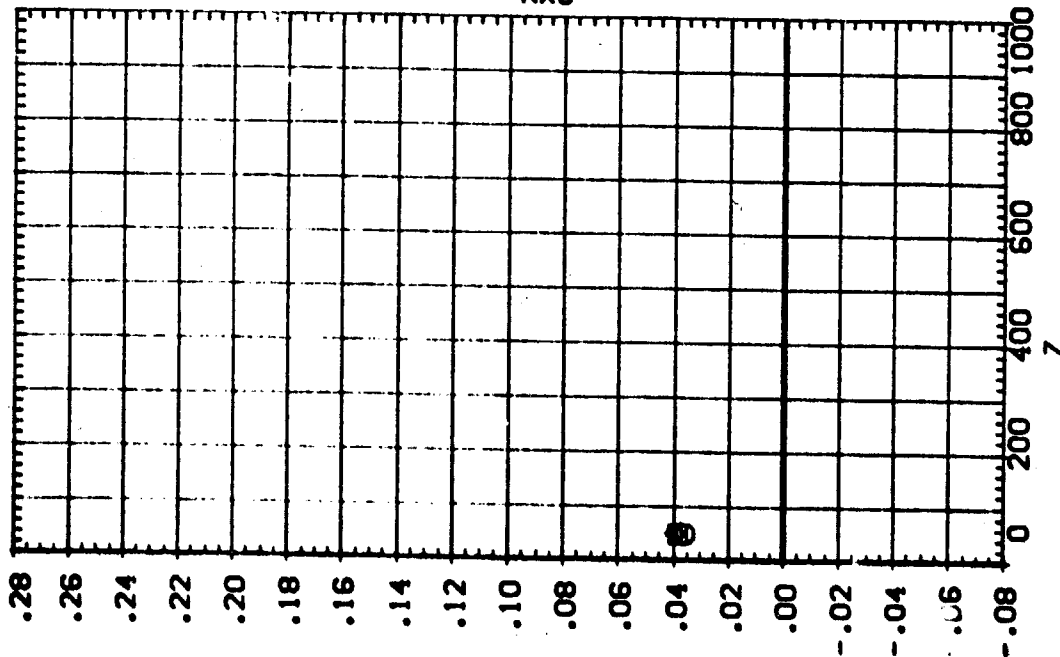
SEE THE ASSOCIATED DATA

DOCUMENT FOR REFERENCE

CHARACTERISTICS FOR

INDIVIDUAL DATASETS

PARAMETRIC VALUES
4.510 PTOTAL 29.000
.000 BETA .000
800.000 DBETA 1500.000
POWER

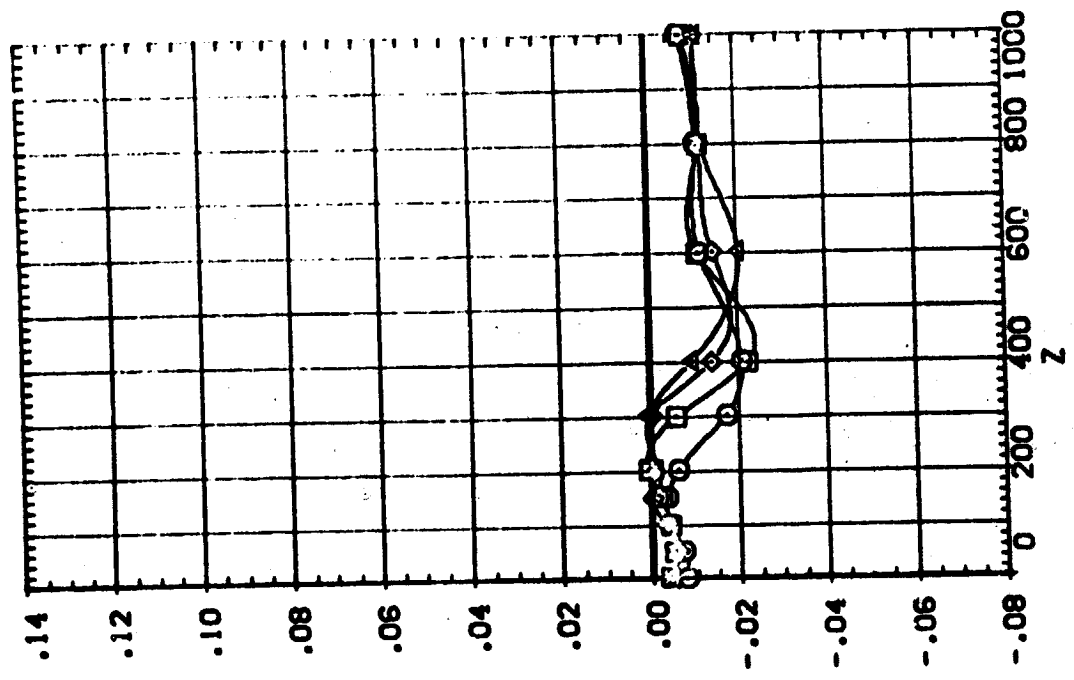
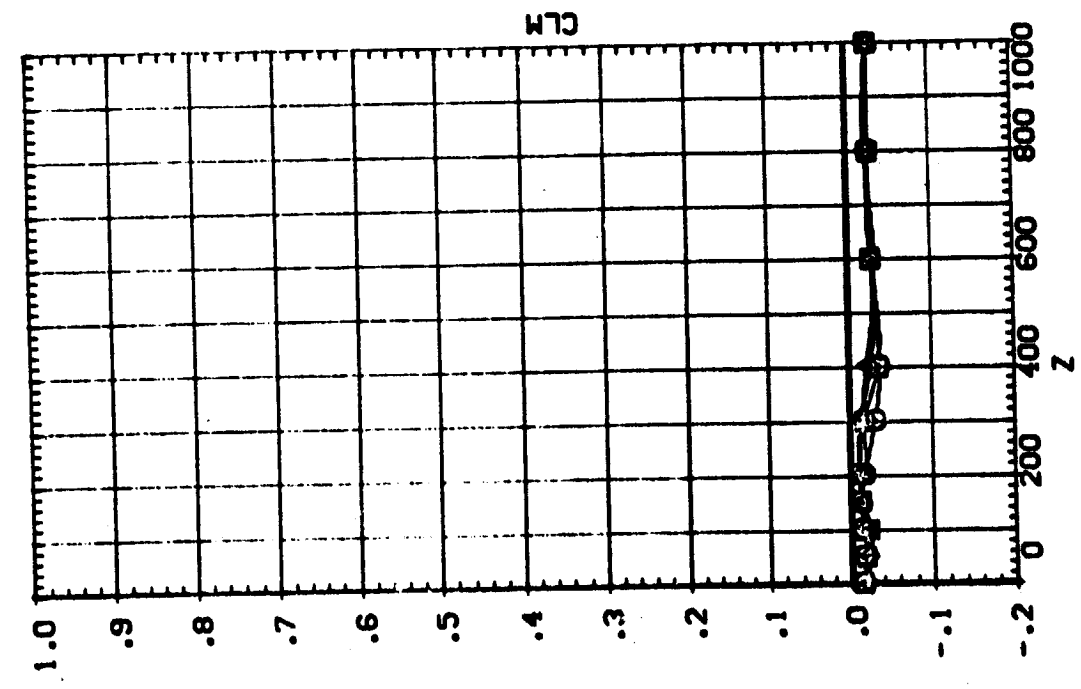


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ310)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|--------|----------|
| | | MACH | PI TOTAL | 58.000 | |
| ○ | 300.340 | ALPHA | .000 | BETA | .000 |
| □ | 600.510 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.690 | Y | .000 | PC+PR | 1500.000 |



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ310)

SYMBOL

X

○

□

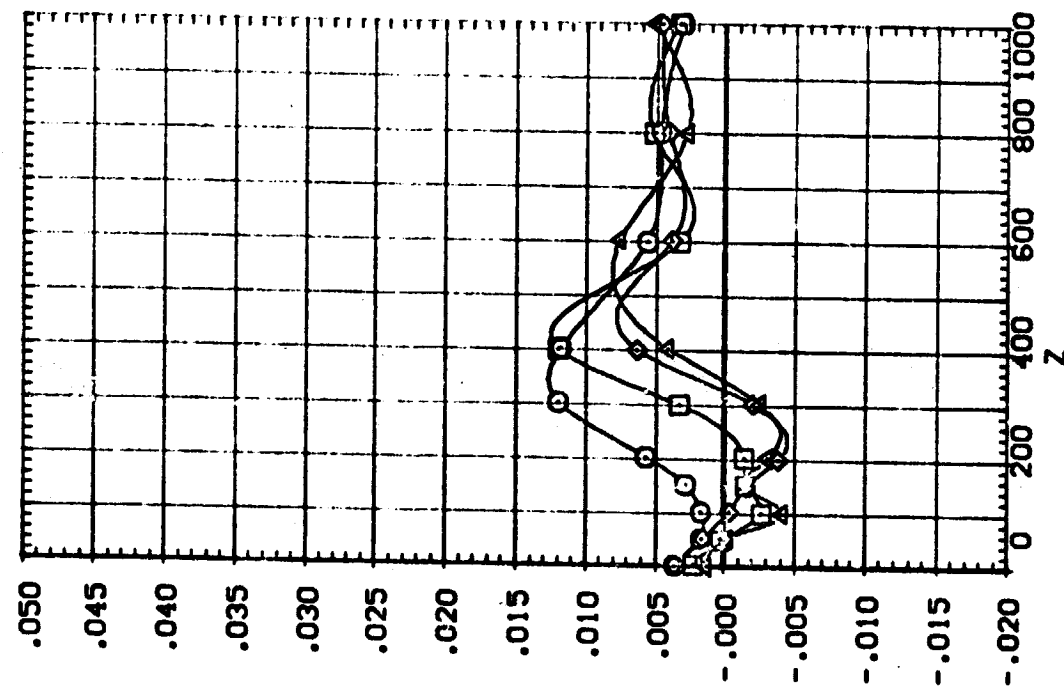
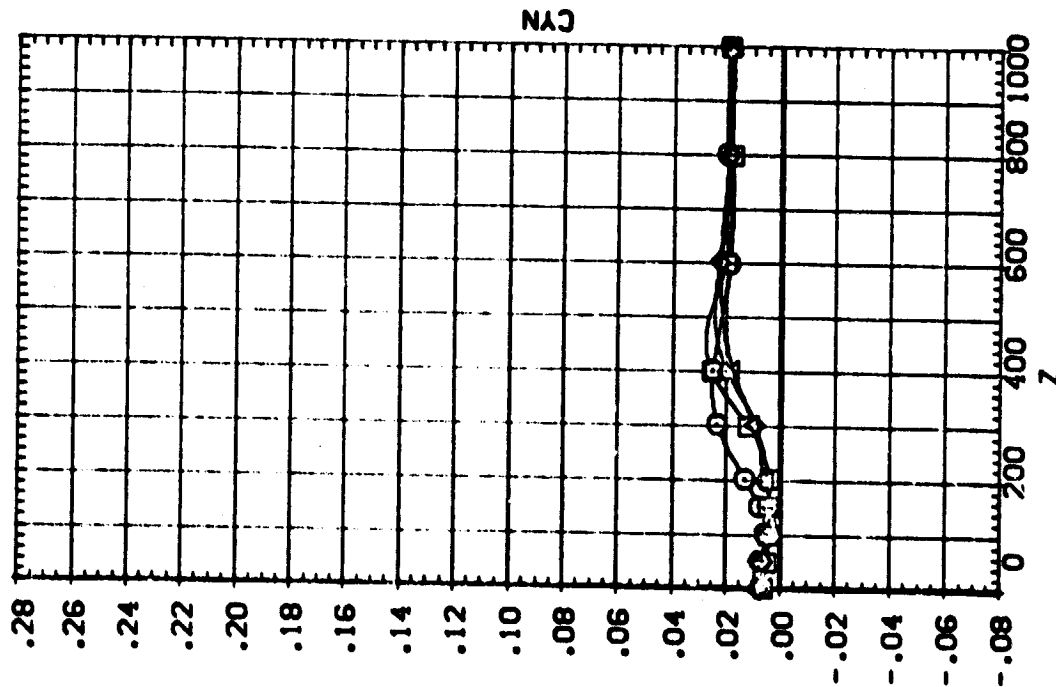
◇

△

PARAMETRIC VALUES

| | MACH | PTOTAL | 58.000 |
|---------|------|--------|----------|
| 300.340 | .000 | BETA | .000 |
| 600.510 | .000 | DBETA | .000 |
| 900.690 | .000 | PD+PR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

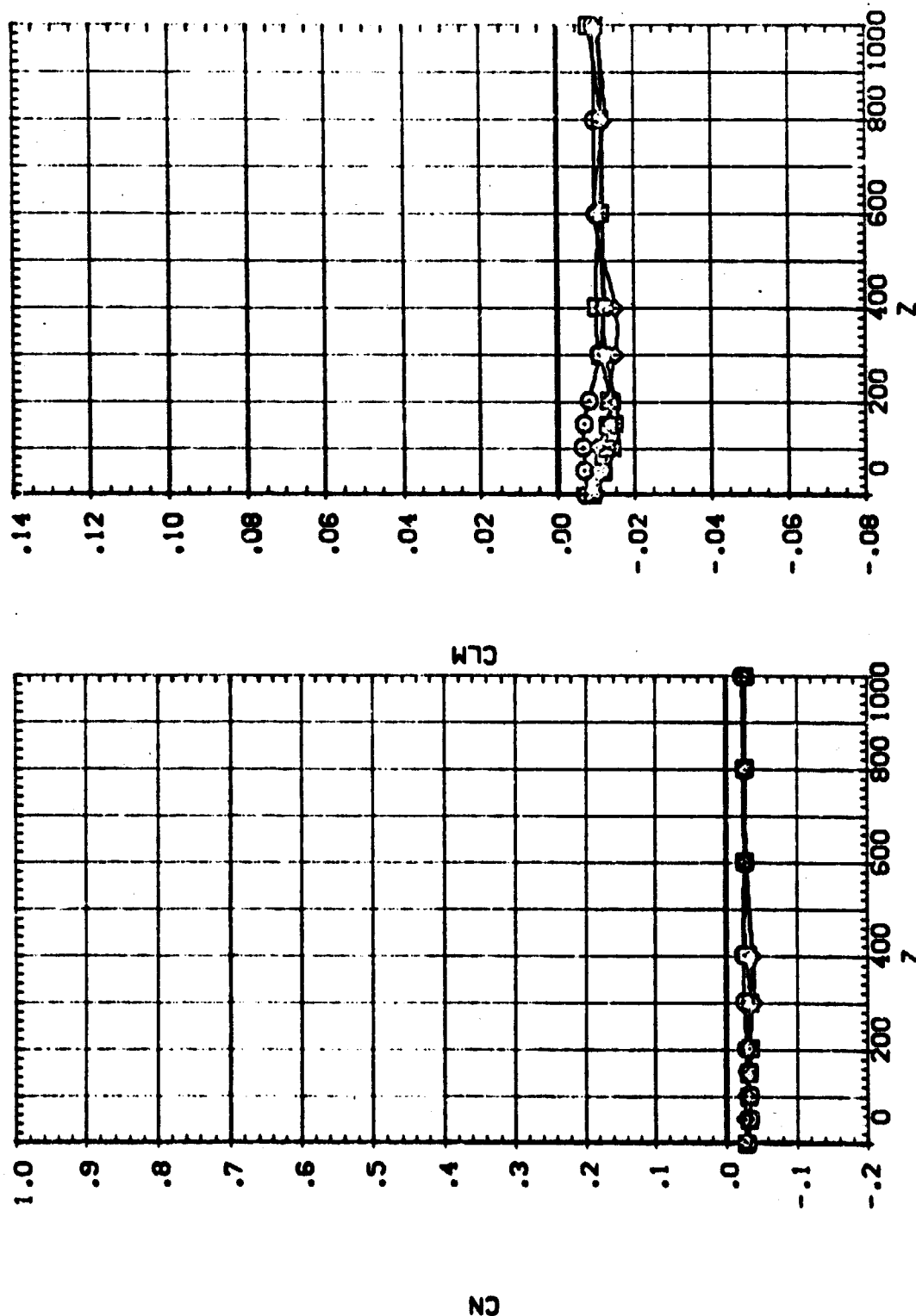


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ311)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.520 | POTIAL | 58.000 |
| ○ | 300.440 | ALPHA | .000 | BETA | .000 |
| □ | 600.370 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.570 | Y | 200.000 | PO-MBR | 1500.000 |



SYMBOL

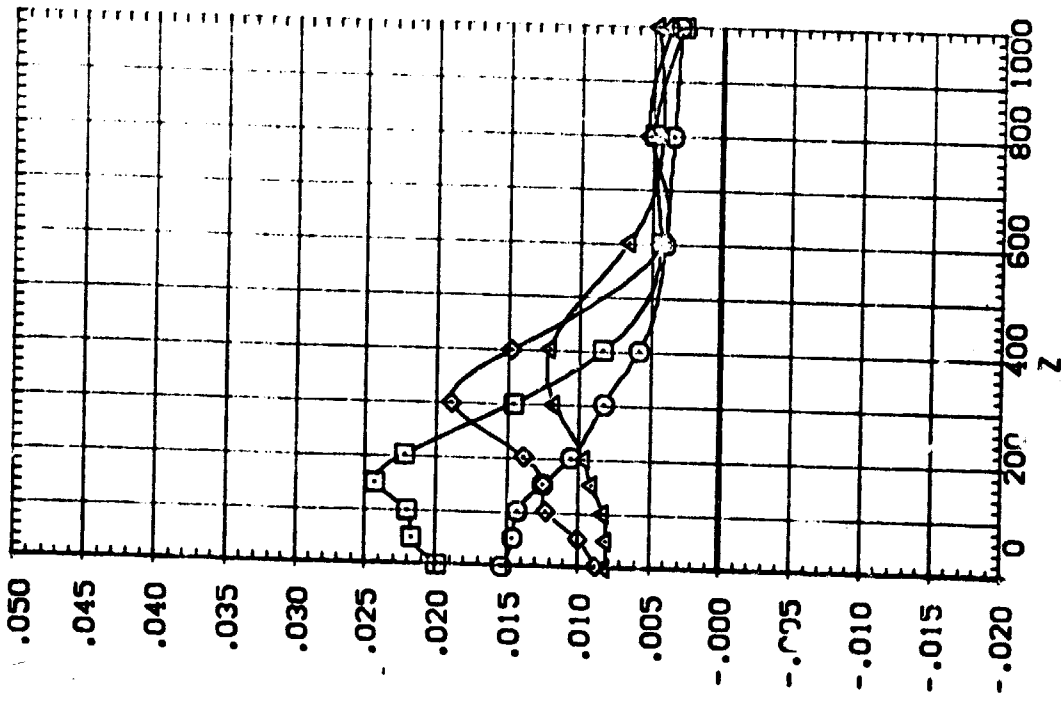
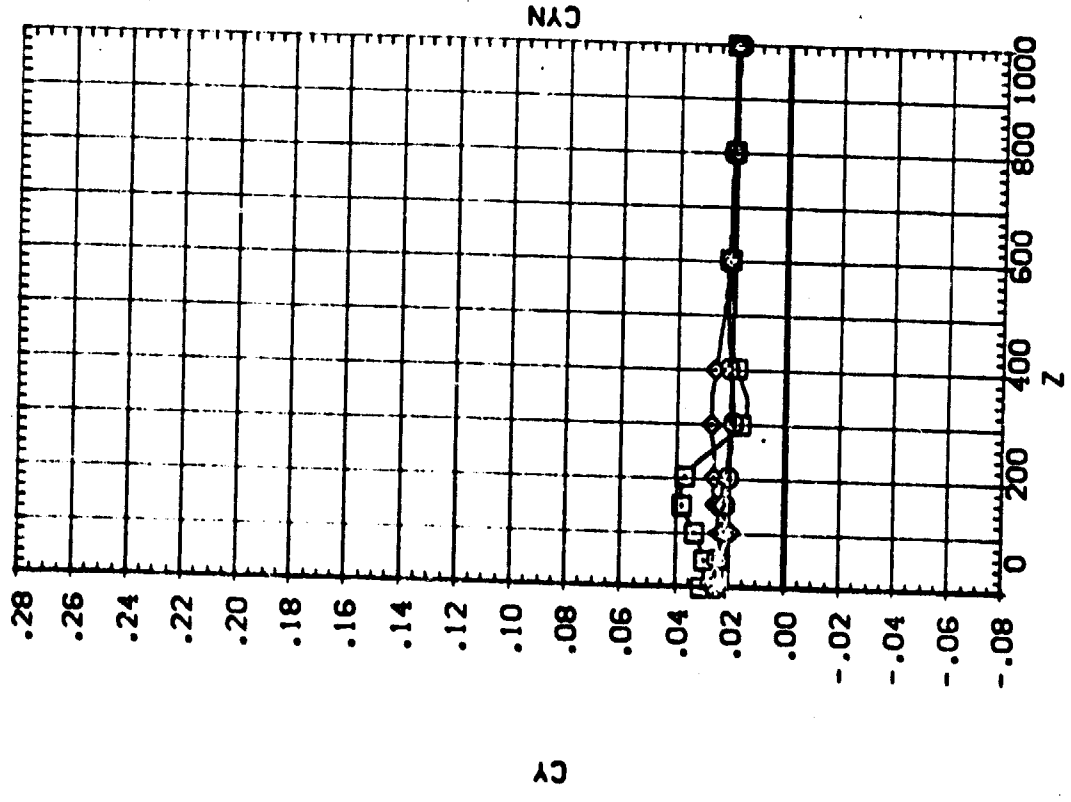
X

-
-
- ◇
- △

PARAMETRIC VALUES

| | | | |
|--------|---------|--------|----------|
| MACH | 4.520 | POTIAL | 58.000 |
| ALPHA | .000 | BETA | .000 |
| DALPHA | .000 | DBETA | .000 |
| Y | 200.000 | POWER | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

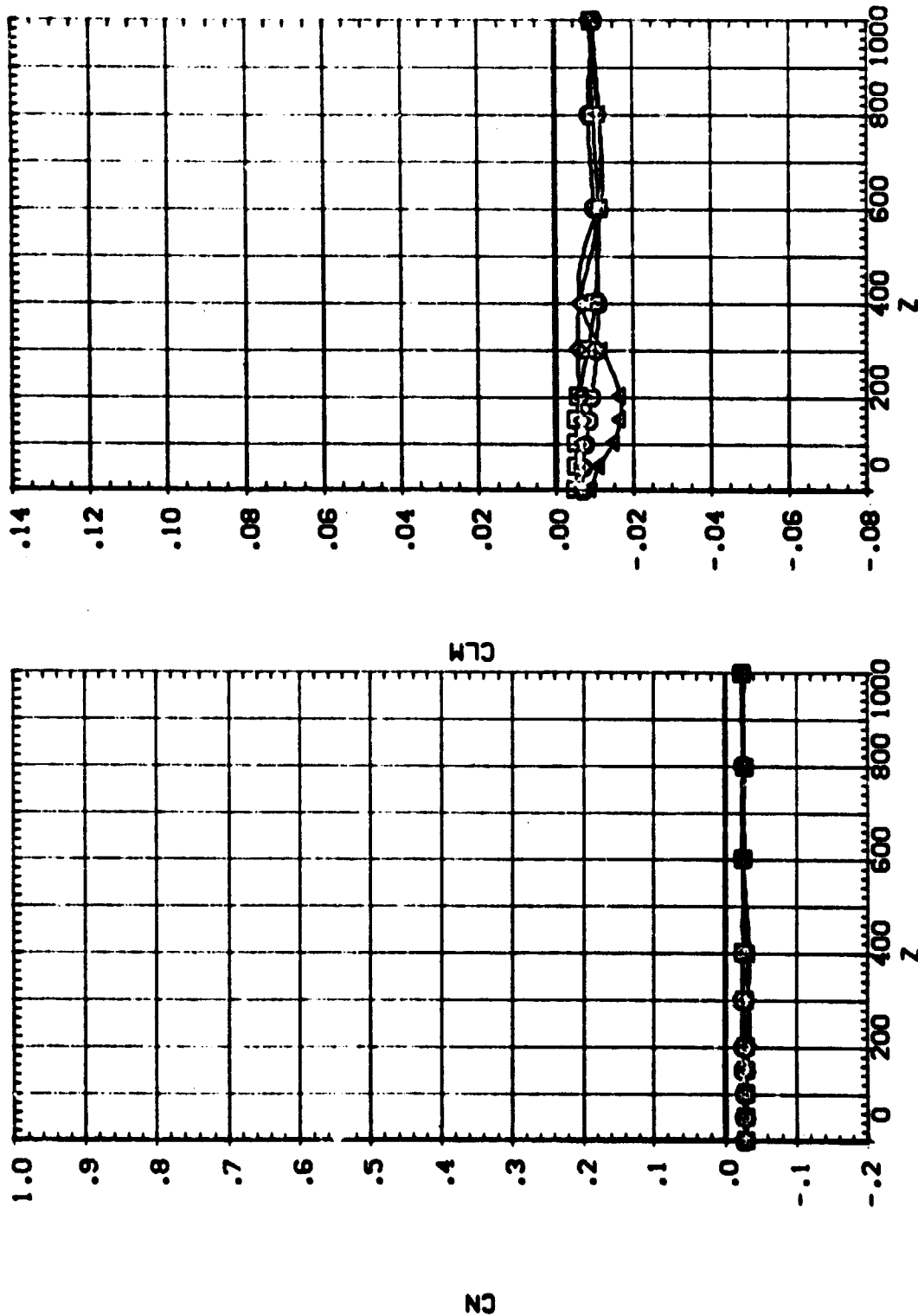


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SR8(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ312)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

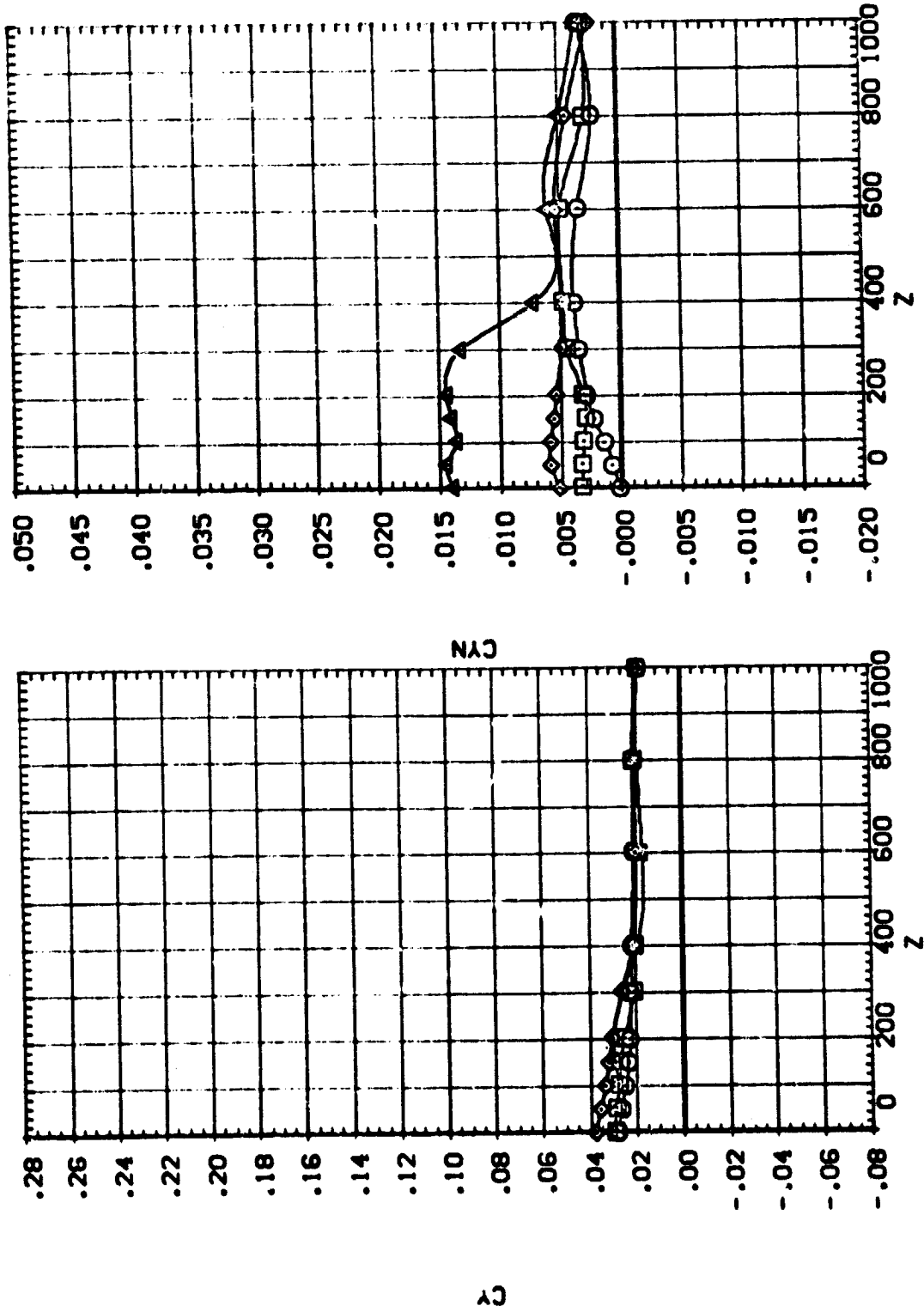
| SYM-BOL | X | PARAMETRIC VALUES | | | | |
|---------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.520 | PTOTAL | 50.000 | |
| □ | 300.430 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.450 | DALPHA | .000 | DBETA | .000 | |
| △ | 500.620 | Y | 400.000 | POWER | 1500.000 | |



SR8 W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .197 | 4.520 | PISTAL 50.000 |
| □ | 300.430 | .000 | BETA .000 |
| ◇ | 600.450 | .000 | DBETA .000 |
| △ | 900.620 | 400.000 | PO-MR 1500.000 |

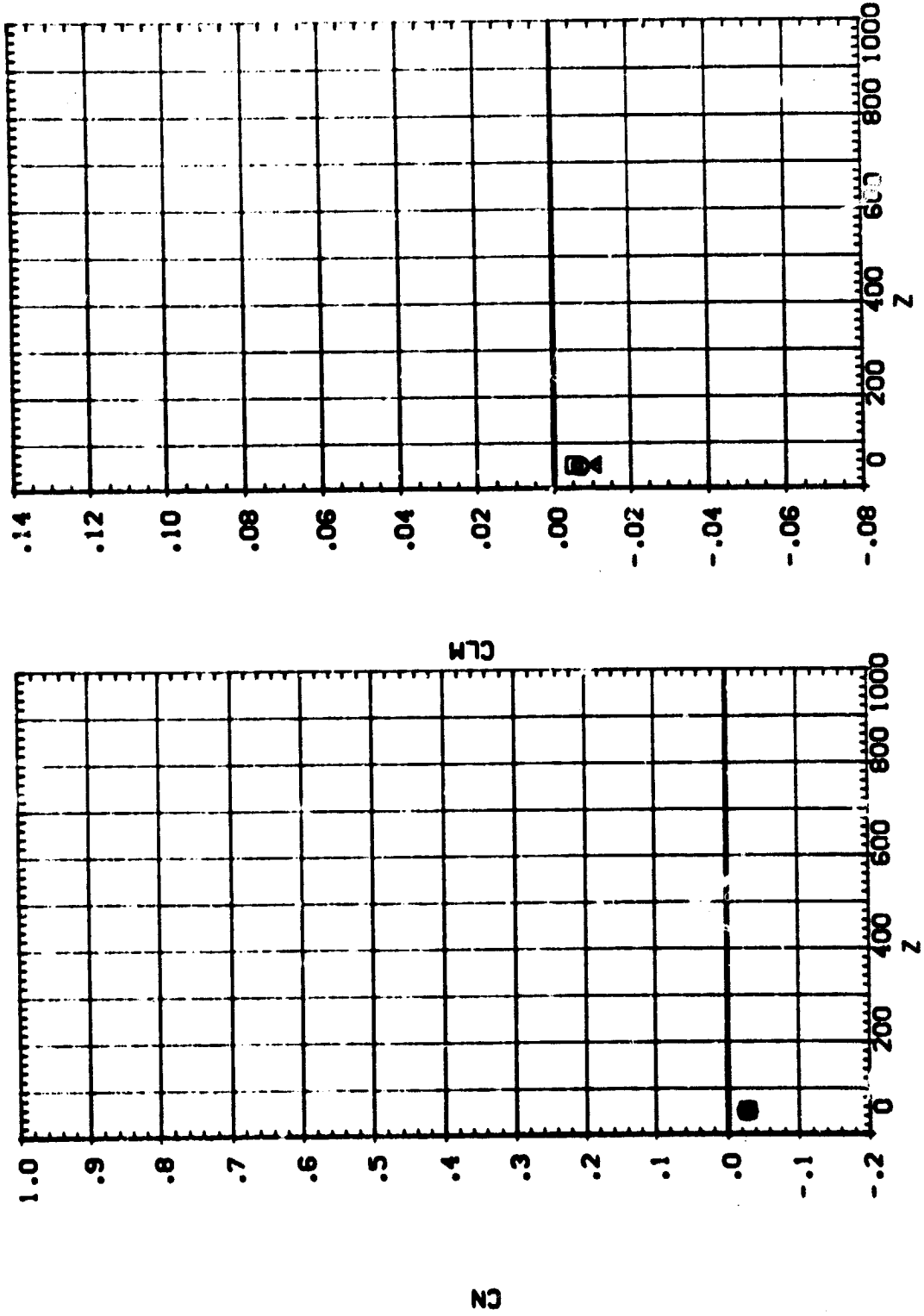


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ313)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

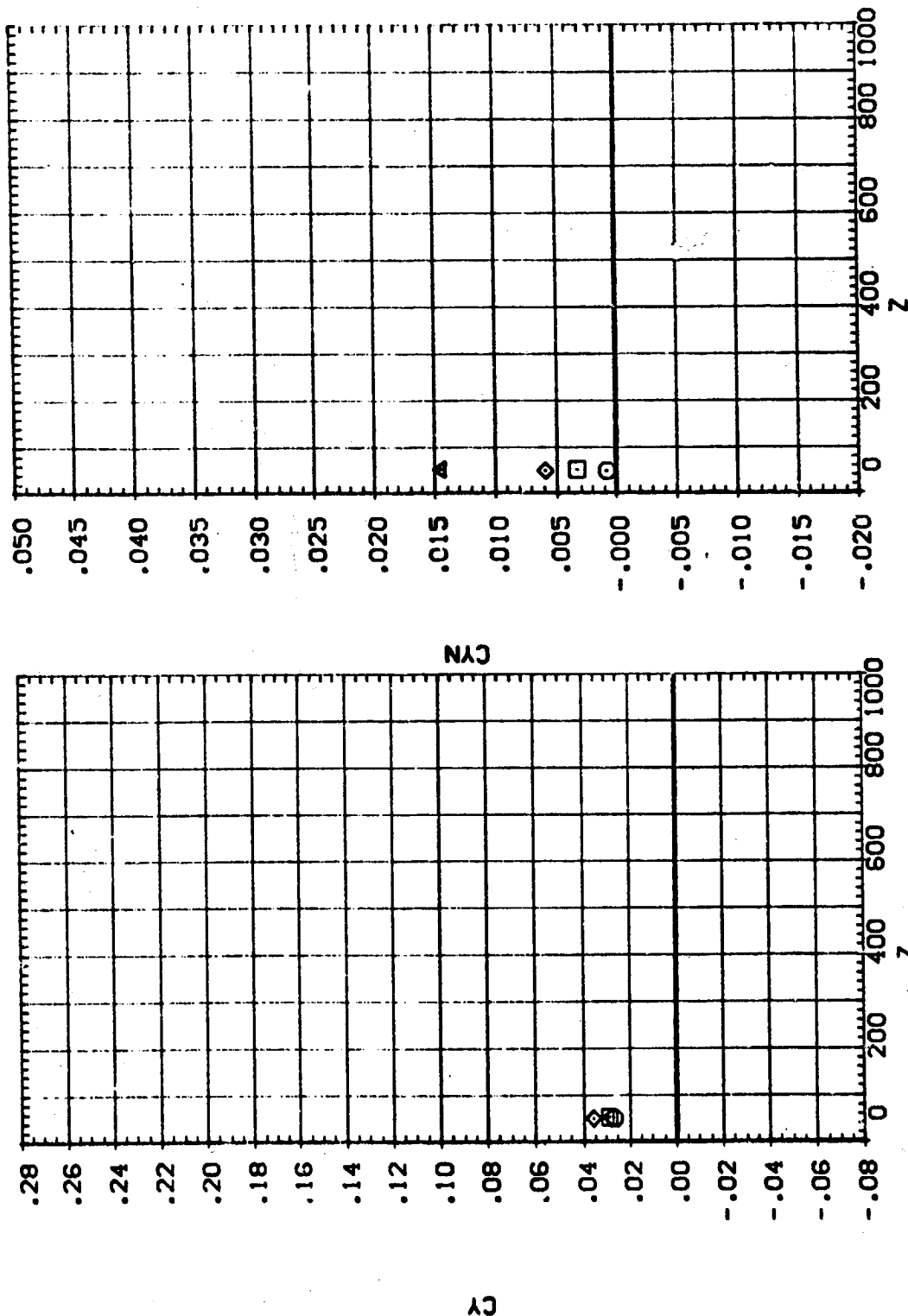
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.520 | PTOTAL | 58.000 | |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.410 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.640 | Y | 800.000 | PC-PR | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ313)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.520 | PTOTAL | 59.000 | |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.410 | DALPHA | .000 | DBETA | .000 | |
| △ | 900.640 | Y | 800.000 | PC-MR | 1500.000 | |

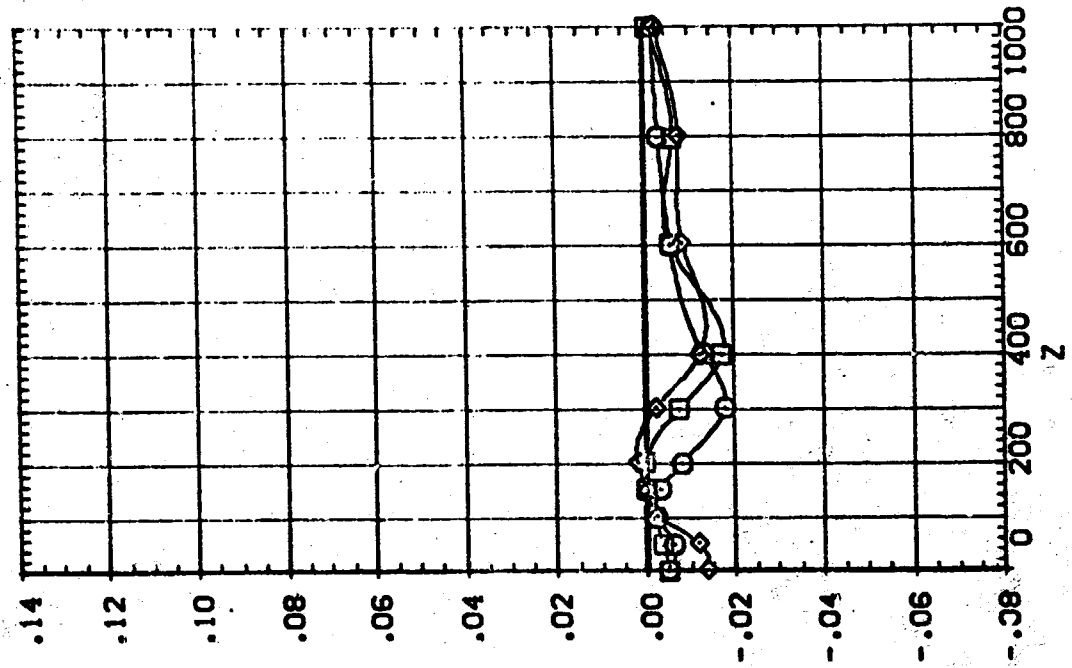
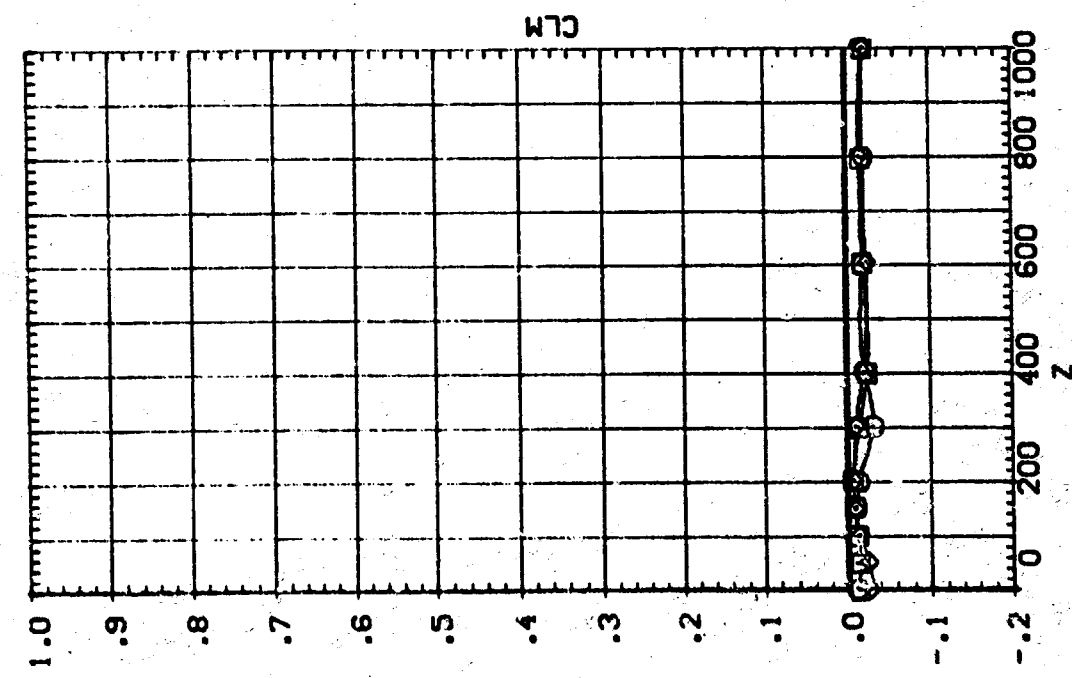


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ314)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBO | X | PARAMETRIC VALUES | | | |
|-------|---------|-------------------|-------|--------|----------|
| | | MACH | 4.530 | PTOTAL | 110.000 |
| ○ | 300.320 | ALPHA | .000 | BETA | .000 |
| □ | 600.470 | DALPHA | .000 | DBETA | .000 |
| ◇ | | Y | .000 | PC-HR | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ314)

SYMBOL

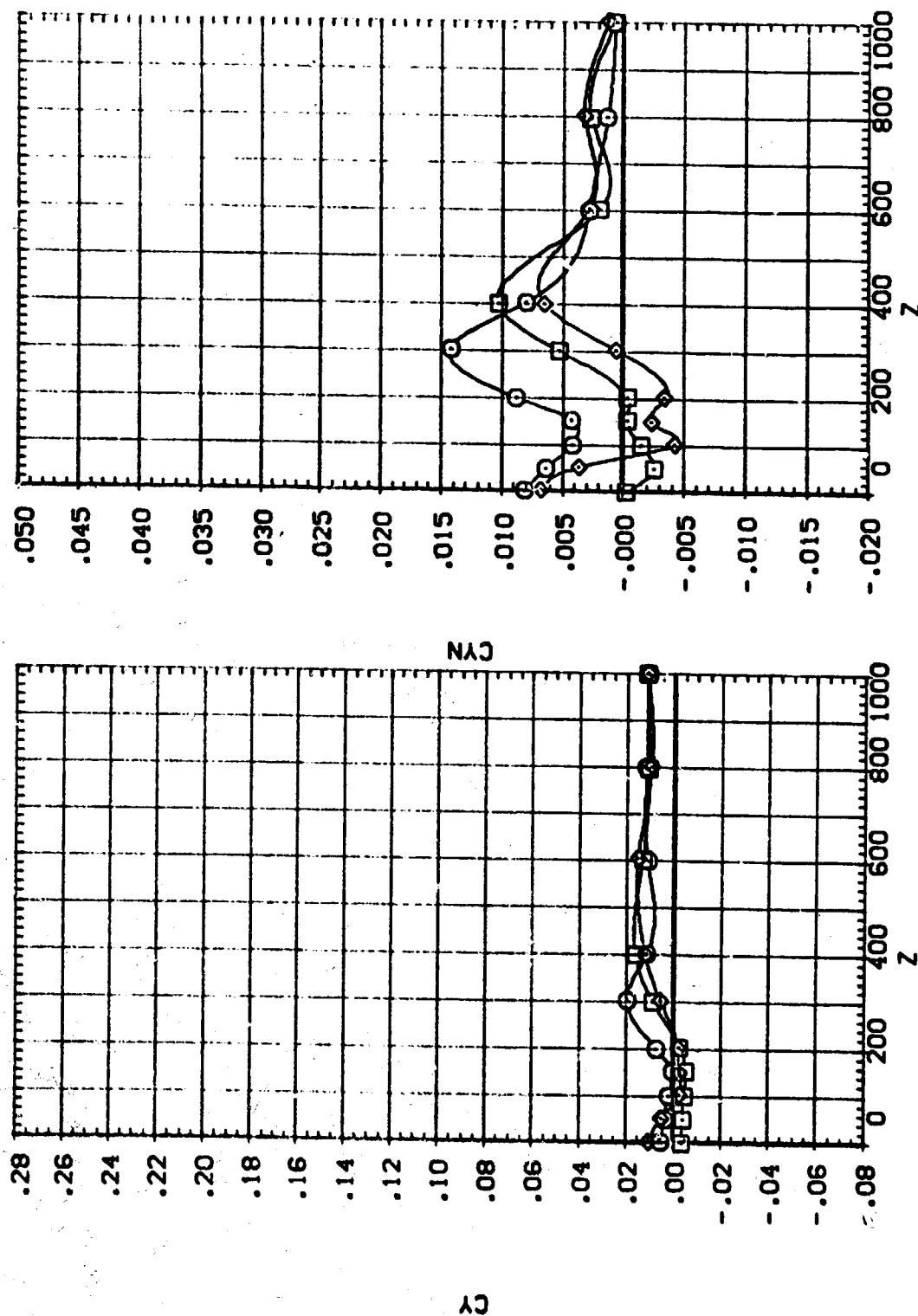
x
○
□
◇

MACH
ALPHA
DALPHA
Y

PARAMETRIC VALUES

4.530 PITOTAL 110.000
.000 BETA .000
.000 CSEETA .000
.000 POWER 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

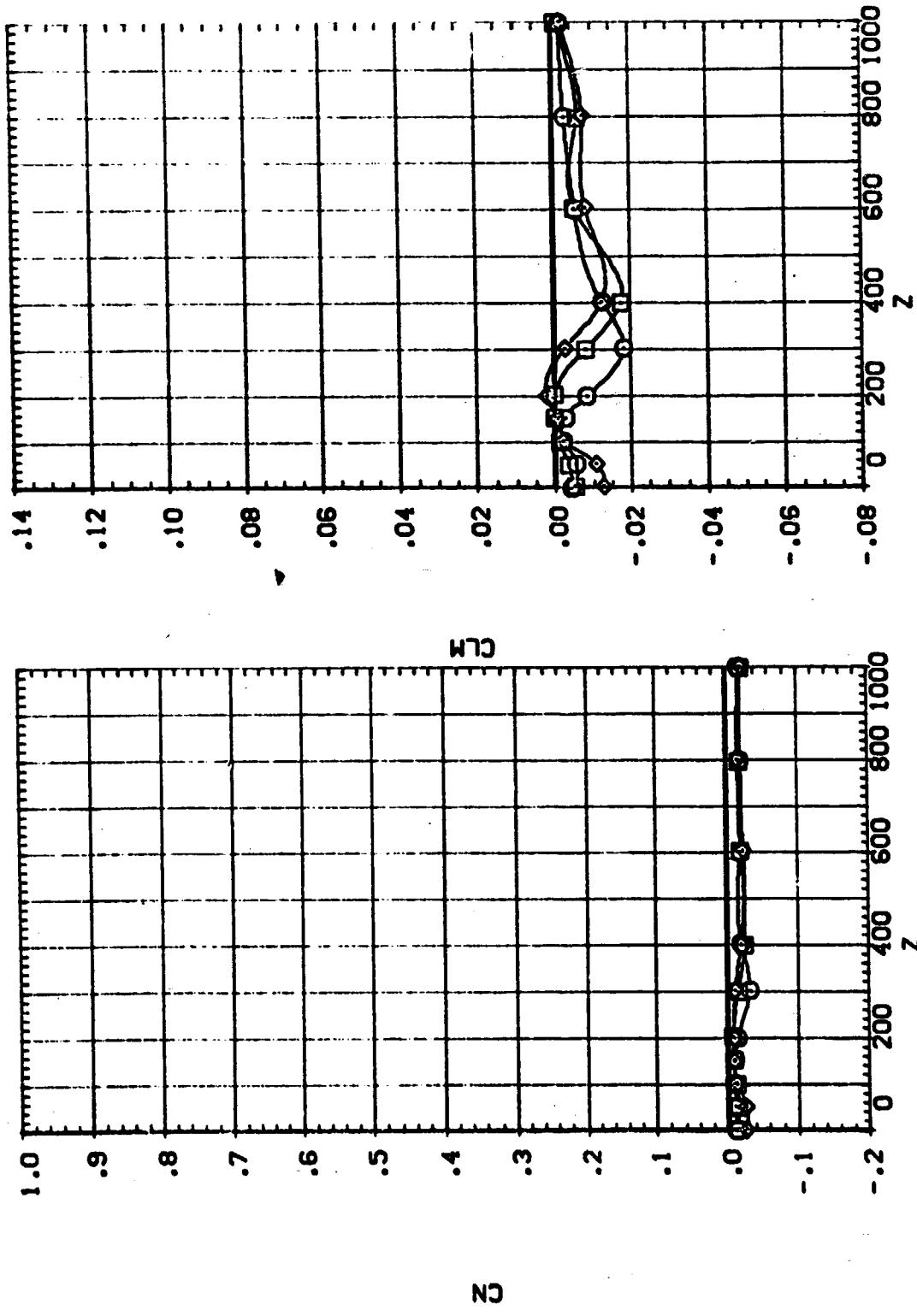


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ315)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|------|----------|
| | | MACH | PTOTAL | BETA | POWER |
| ○ | .135 | 4.530 | 110.000 | .000 | 5.000 |
| □ | 300.320 | .000 | .000 | .000 | 1500.000 |
| ◇ | 600.380 | .000 | .000 | .000 | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ315)

SYMBOL

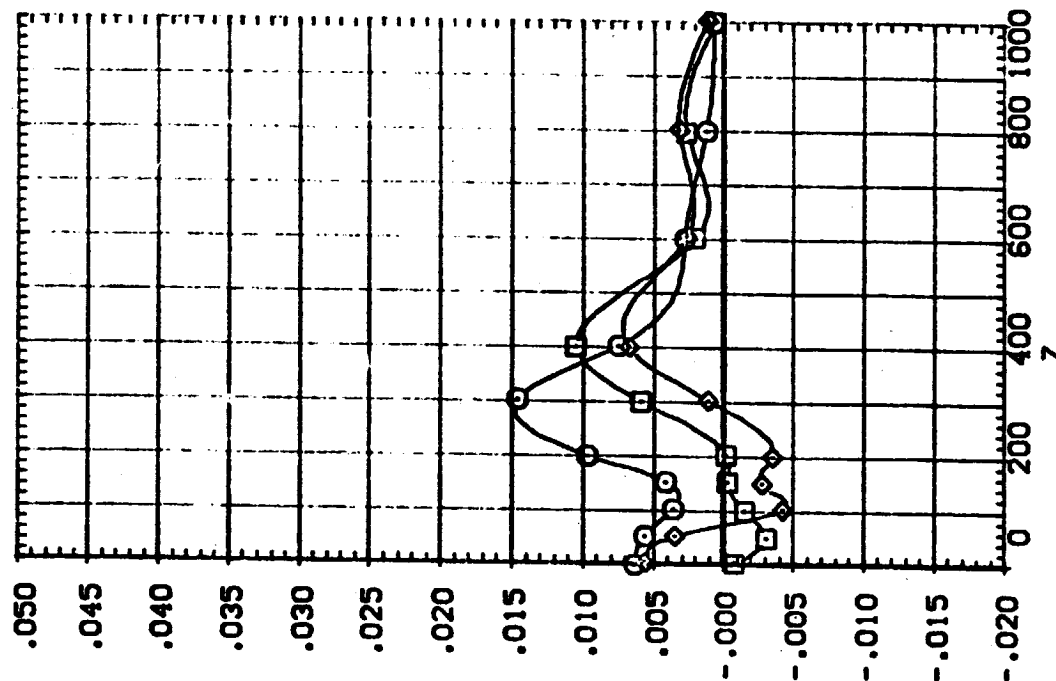
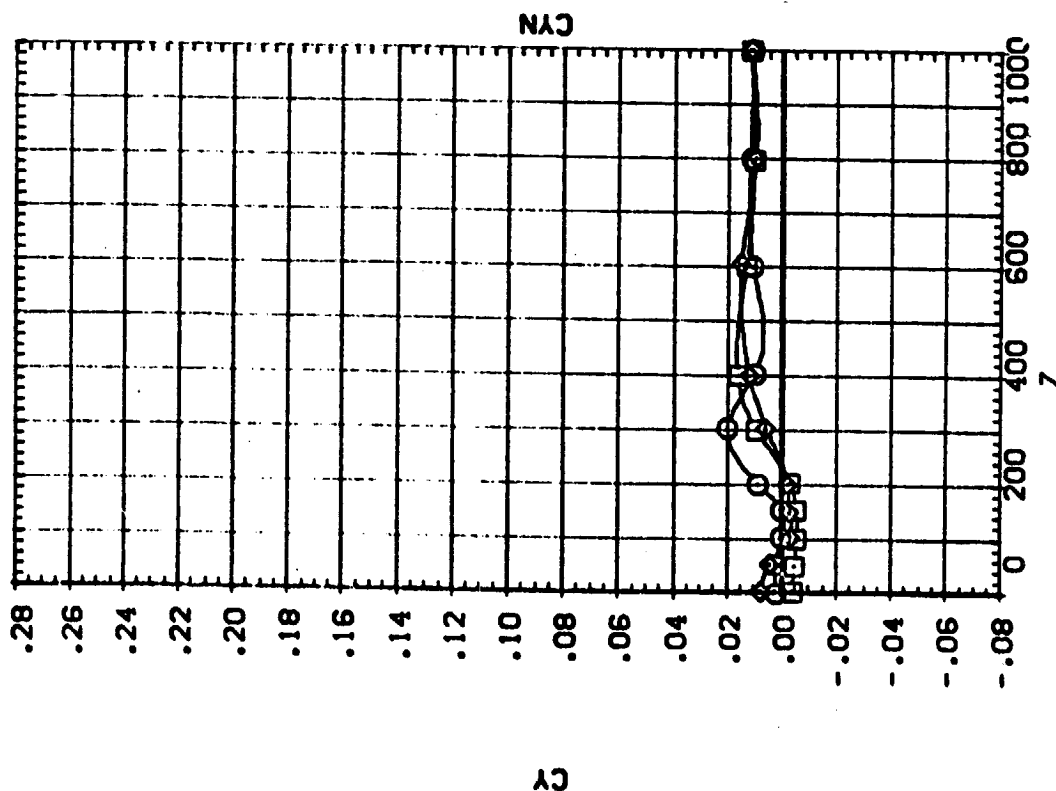
X

○ □ ◇

PARAMETRIC VALUES

| | MACH | PTOTAL | 110.000 |
|---------|-------|--------|----------|
| 300.320 | .000 | BETA | .000 |
| 600.380 | .000 | DBETA | .000 |
| | 5.000 | PC-MFR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



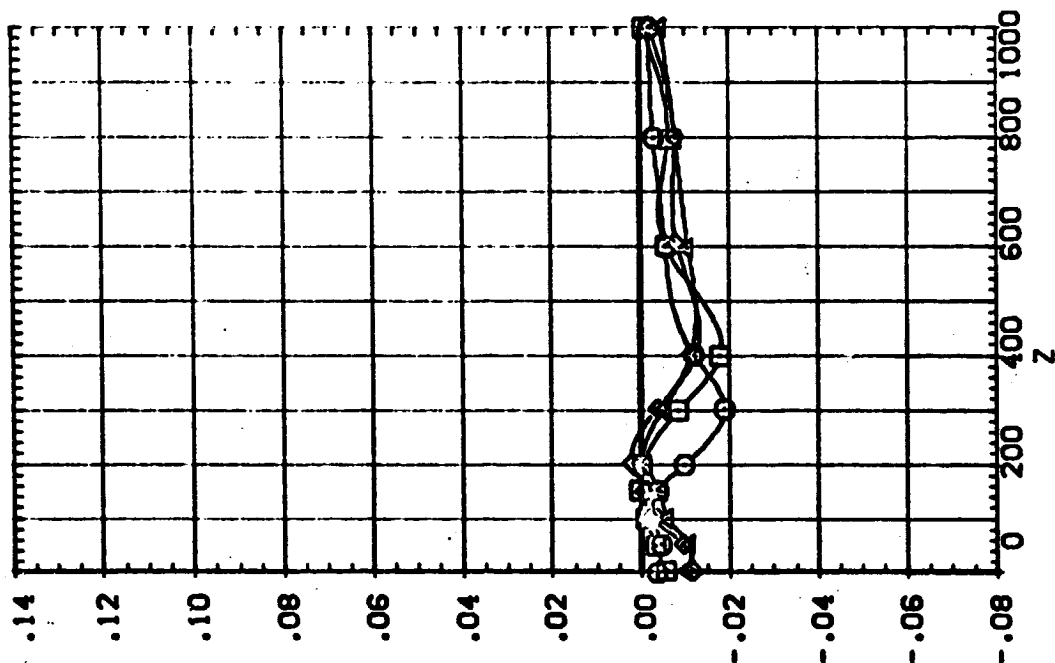
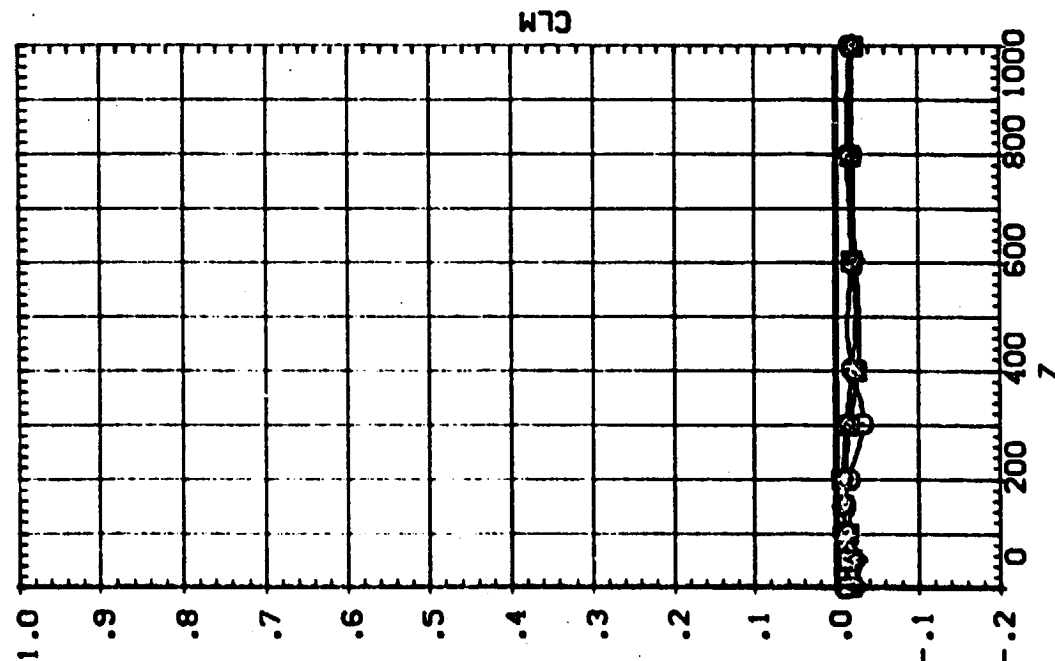
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ316)

SYMBOL X
 ○ 300.400
 □ 600.440
 ◇ 900.920

PARAMETRIC VALUES
 MACH .176
 ALPHA .000
 BETA .000
 DBETA .000
 POWER 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ316)

SYMBOL

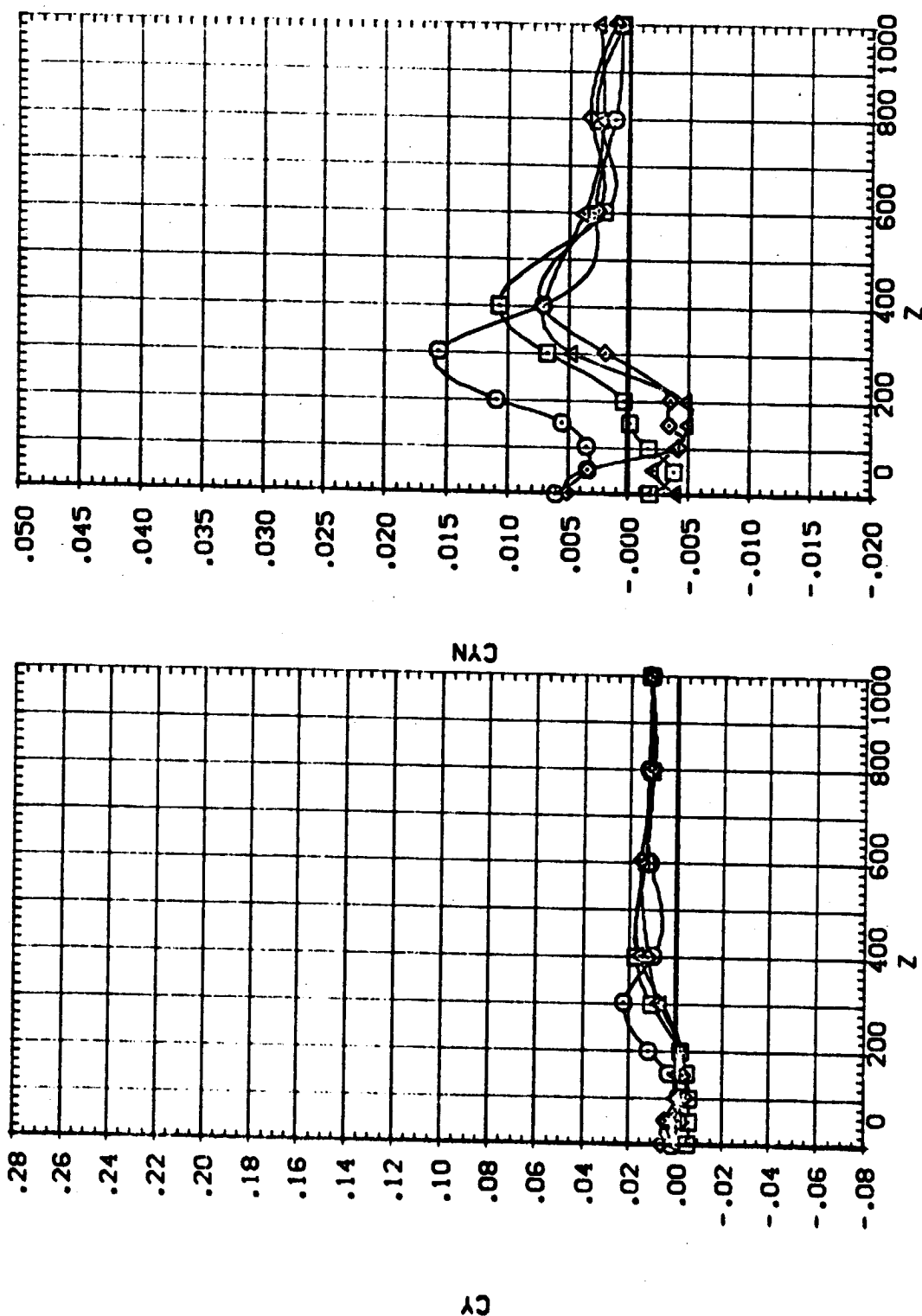
X

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | BETA | DBETA | PC+PR |
|---------|------|--------|------|-------|---------|
| 300.400 | .176 | 4.530 | .000 | .000 | 110.000 |
| 600.440 | .176 | 4.530 | .000 | .000 | 110.000 |
| 900.920 | .176 | 4.530 | .000 | .000 | 110.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ317)

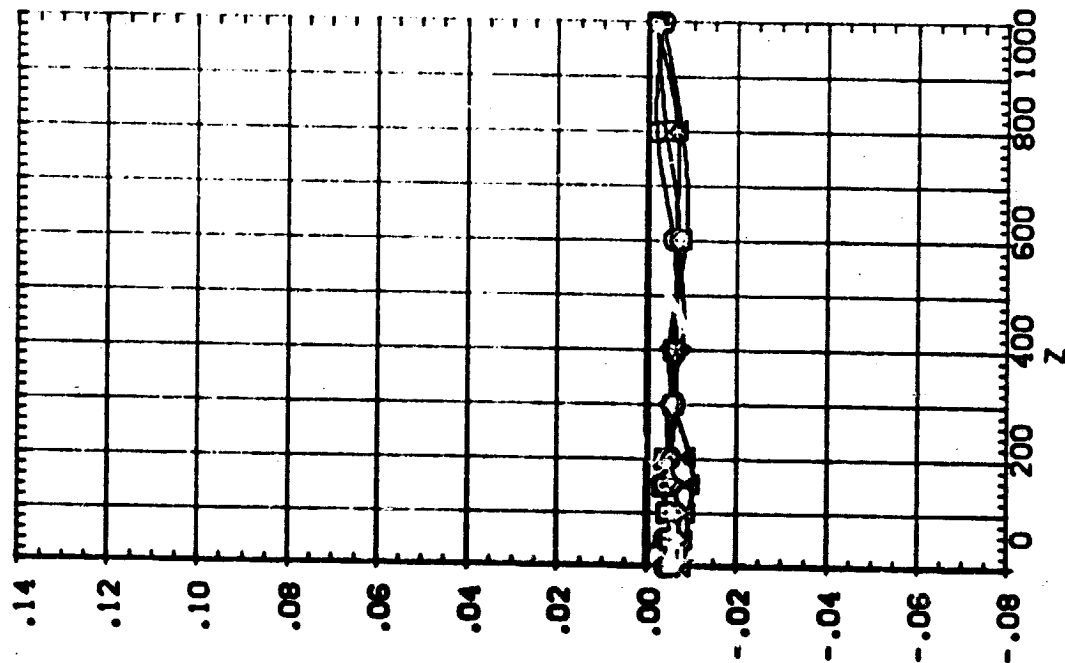
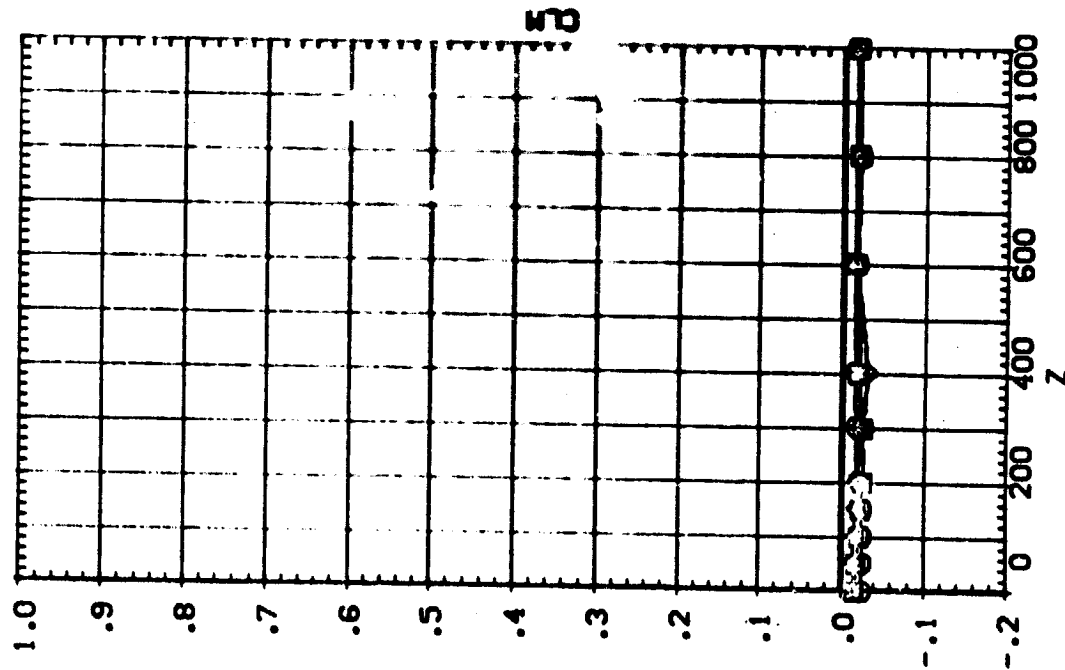
SYMBOL

☐ 0
☐ 300.420
☐ 600.530
☐ 900.650

PARAMETRIC VALUES

MACH .126
 ALPHA 300.420
 DALPHA 600.530
 Y 900.650
 PTOTAL 4.530
 BETA .000
 DBETA .000
 PC+PR 200.000
 110.000
 .000
 .000
 1500.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

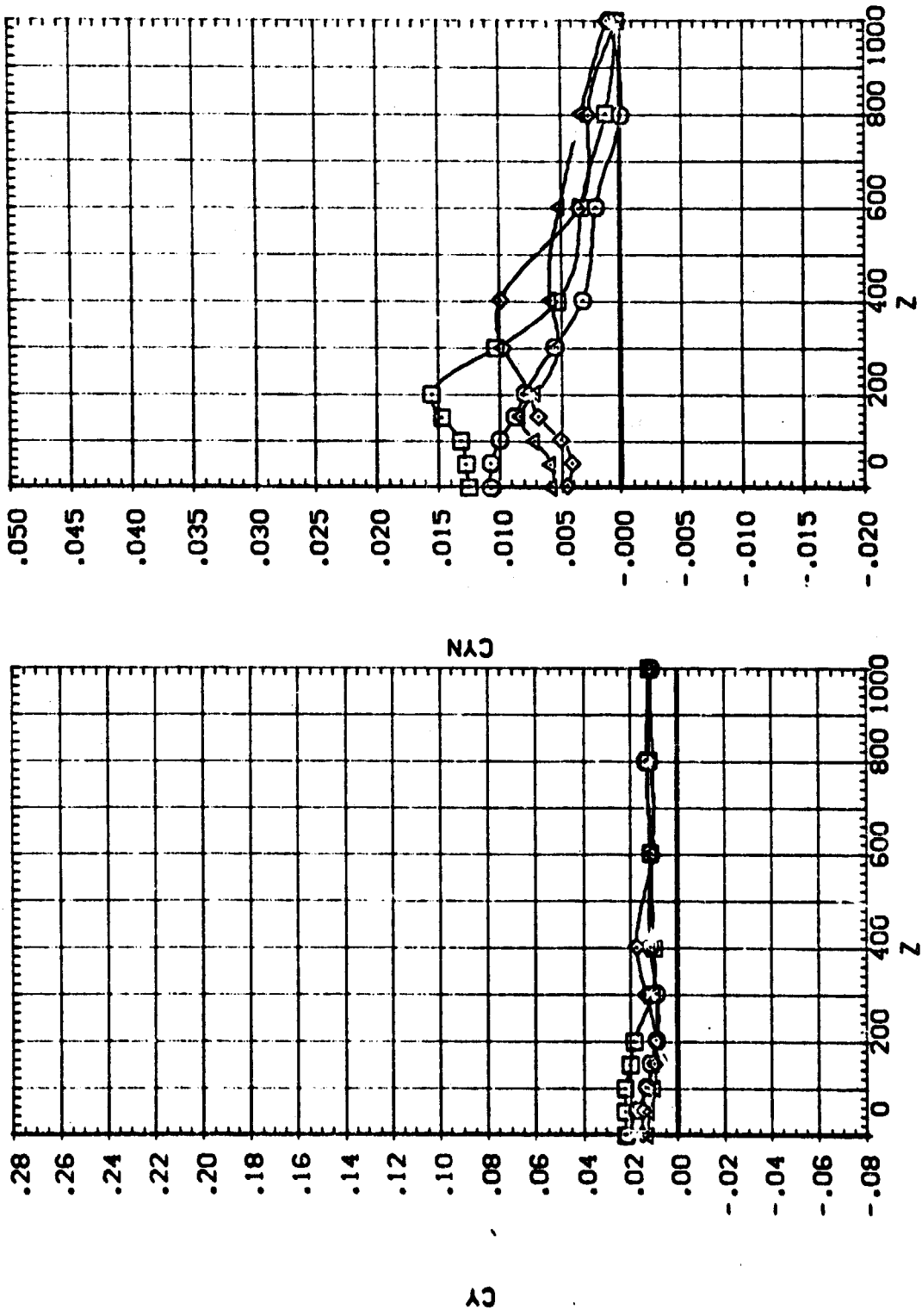


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SYMBOL

| | |
|---------|-------------------|
| X | PARAMETRIC VALUES |
| .126 | MACH |
| 300.420 | ALPHA |
| 600.530 | DALPHA |
| 900.650 | Y |
| | 4.530 PTOTAL |
| | .000 BETA |
| | .000 DBETA |
| | 200.000 PC-MBR |
| | 110.000 |
| | .000 |
| | .000 |
| | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

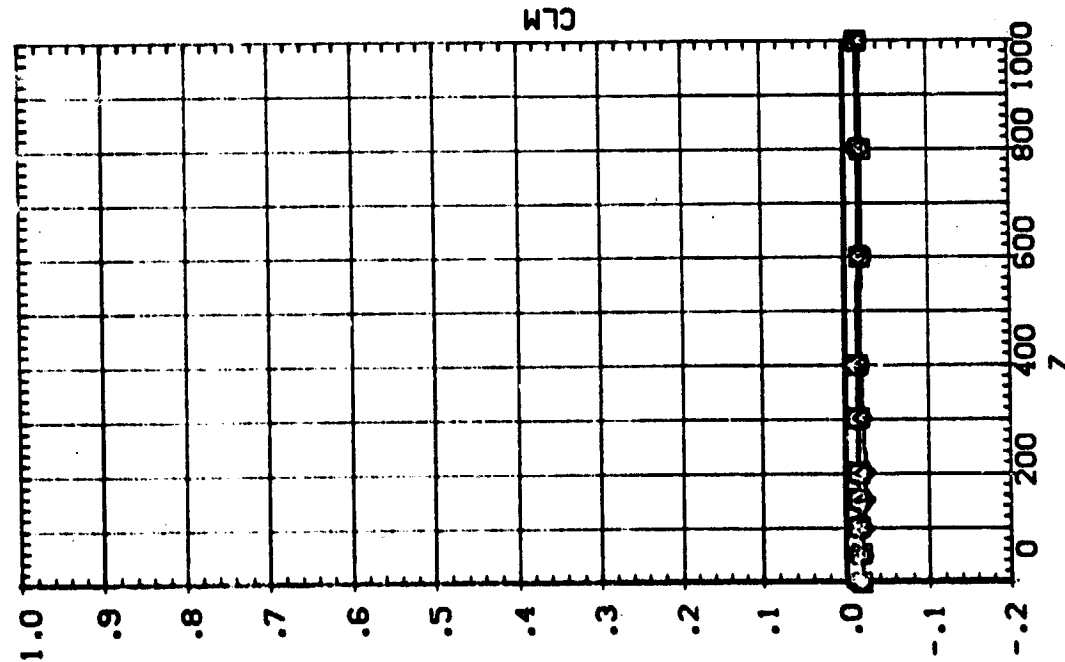
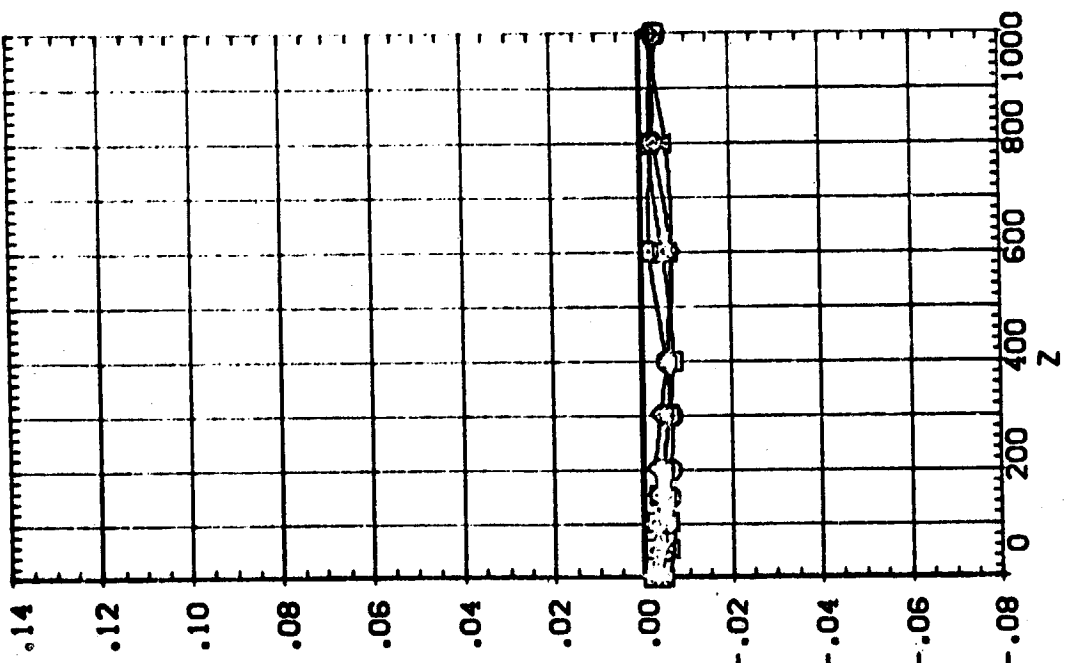


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ318)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | .232 | ALPHA | 4.530 |
| □ | 300.520 | BETA | .000 |
| ◇ | 600.460 | PC-WBR | 400.000 |
| △ | 900.620 | PC-WBR | 1500.000 |

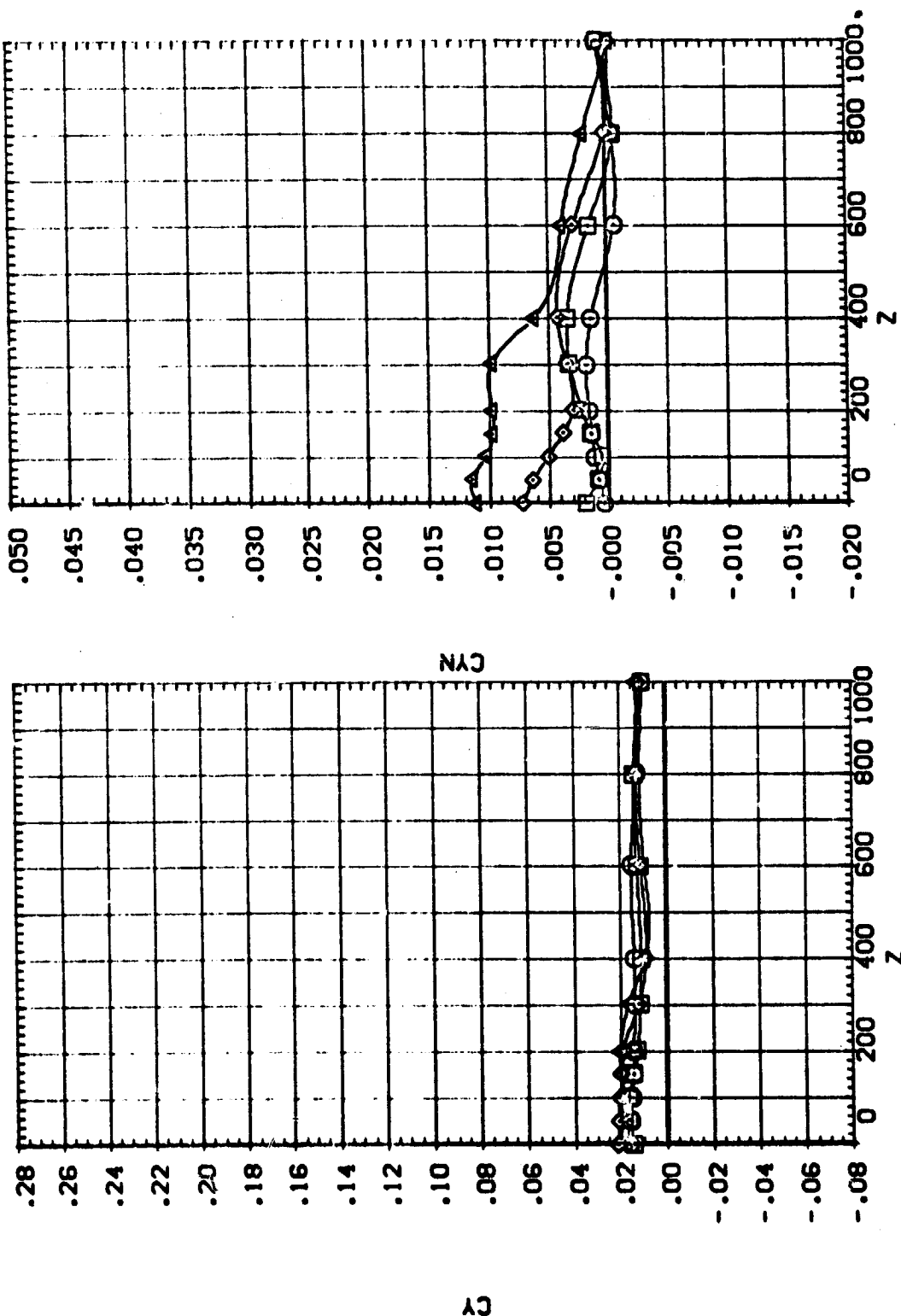


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ318)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X .232 MACH 4.530 PTOTAL 110.000
300.520 ALPHA .000 BETA .000
500.460 DALPHA .000 DBETA .000
900.620 Y 400.000 PC4GR 1500.000



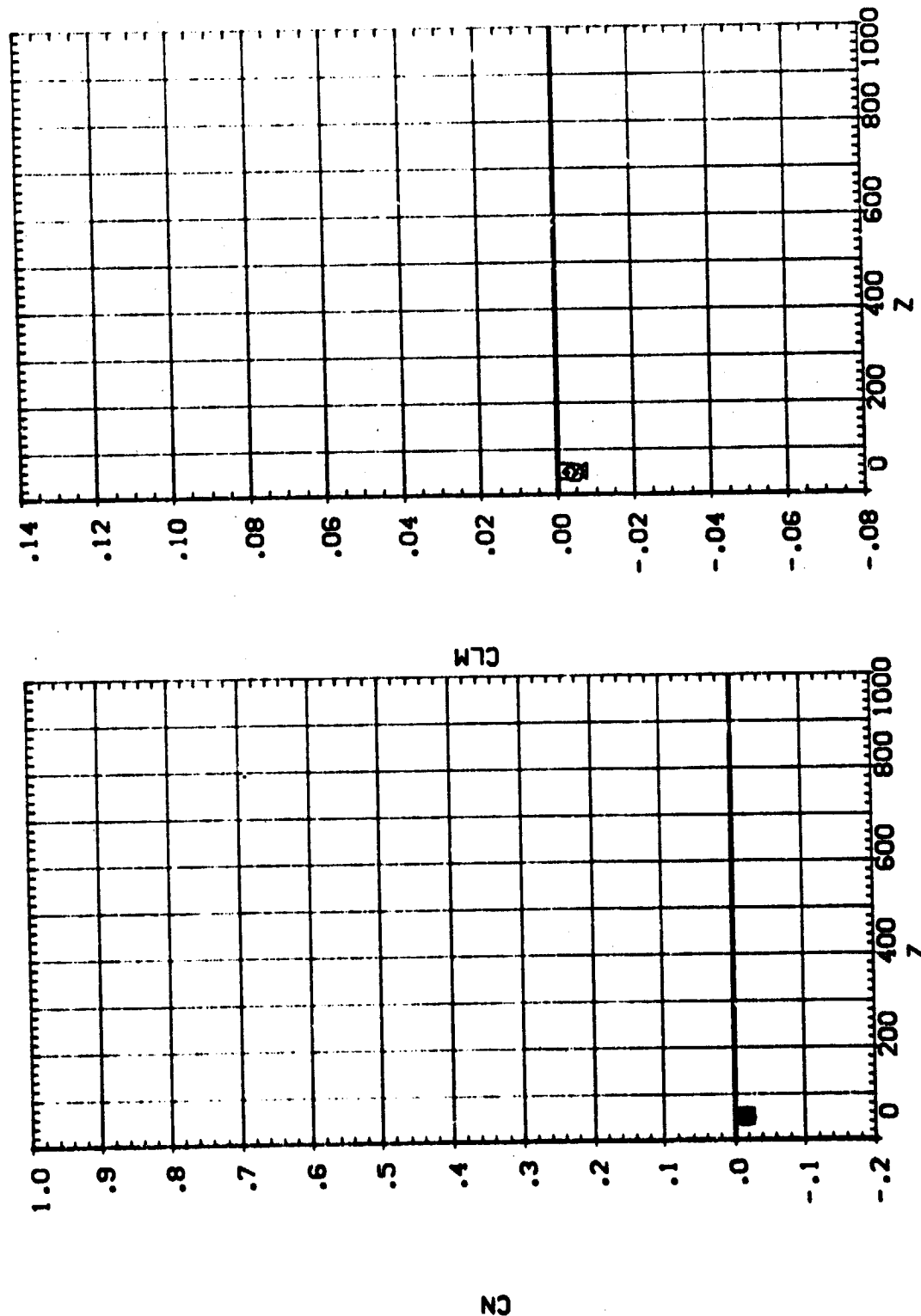
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET



IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ319)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

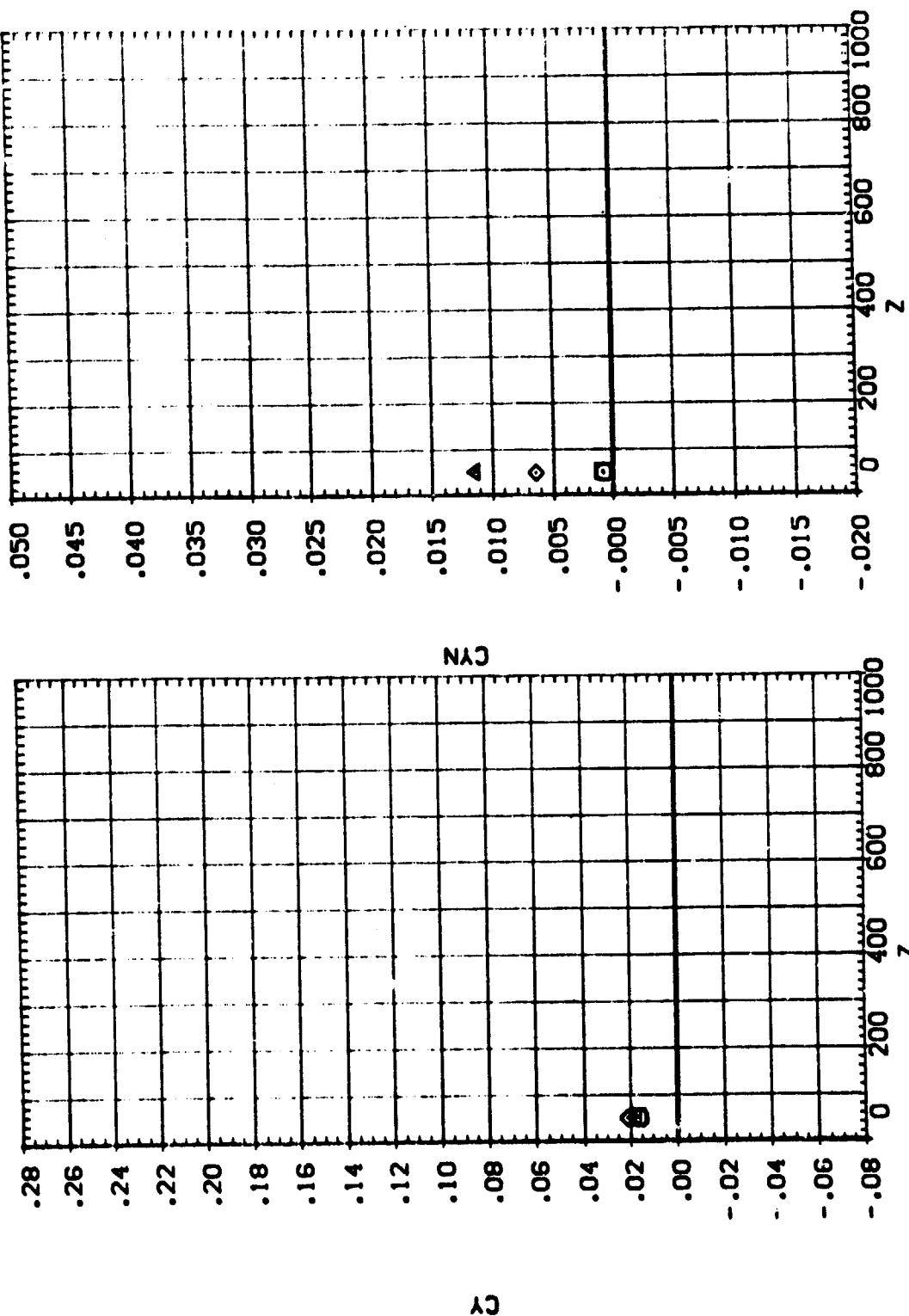
| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|----------|------|--------|
| | | MACH | PTOTAL | BETA | PO-MGR |
| ○ | .280 | 4.530 | 110.000 | .000 | |
| □ | 300.340 | .000 | .000 | .000 | |
| ◇ | 600.550 | .000 | .000 | .000 | |
| △ | 900.750 | 600.000 | 1500.000 | | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ319)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.530 | POTIAL | 110.000 |
| ○ | 300.340 | ALPHA | .000 | BETA | .000 |
| □ | 600.550 | DALPHA | .000 | DBETA | .000 |
| ◇ | 900.750 | Y | 800.000 | PC+PR | 1500.000 |

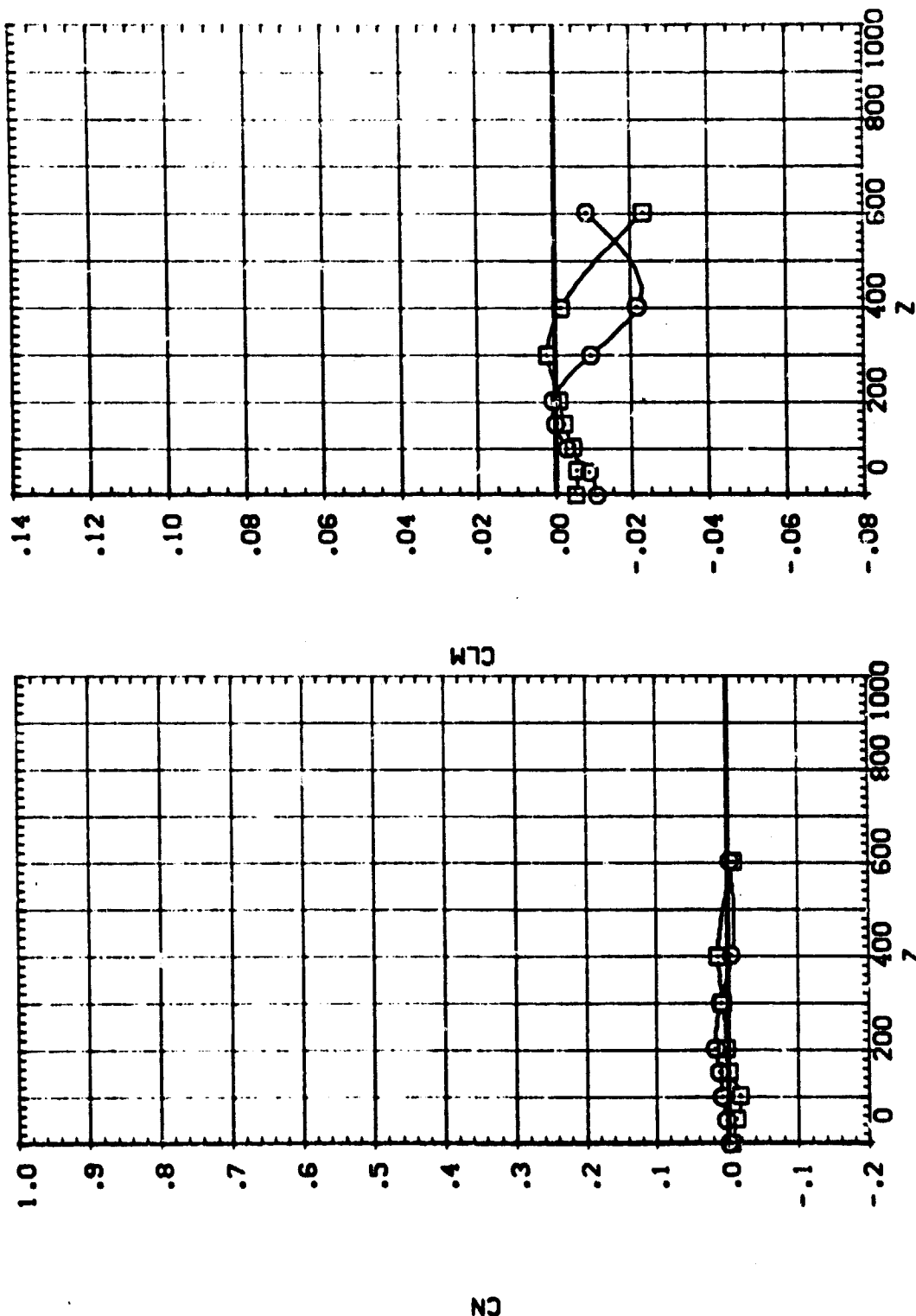


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ358)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | | X | | PARAMETRIC VALUES | |
|--------------------------------------|--------------------------------------|---------|------|-------------------|----------|
| <div> <div></div> <div></div> </div> | <div> <div></div> <div></div> </div> | 900.750 | .314 | MMCH | 20.900 |
| | | | | | |
| | | | | | |
| | | | | | |
| <div> <div></div> <div></div> </div> | <div> <div></div> <div></div> </div> | 900.750 | .314 | ALPHA | .000 |
| | | | | | |
| | | | | | |
| | | | | | |
| <div> <div></div> <div></div> </div> | <div> <div></div> <div></div> </div> | 900.750 | .314 | BETA | .000 |
| | | | | | |
| | | | | | |
| | | | | | |
| <div> <div></div> <div></div> </div> | <div> <div></div> <div></div> </div> | 900.750 | .314 | DALPHA | .000 |
| | | | | | |
| | | | | | |
| | | | | | |
| <div> <div></div> <div></div> </div> | <div> <div></div> <div></div> </div> | 900.750 | .314 | Y | 1500.000 |
| | | | | | |
| | | | | | |
| | | | | | |
| <div> <div></div> <div></div> </div> | <div> <div></div> <div></div> </div> | 900.750 | .314 | POWER | 1500.000 |
| | | | | | |
| | | | | | |
| | | | | | |

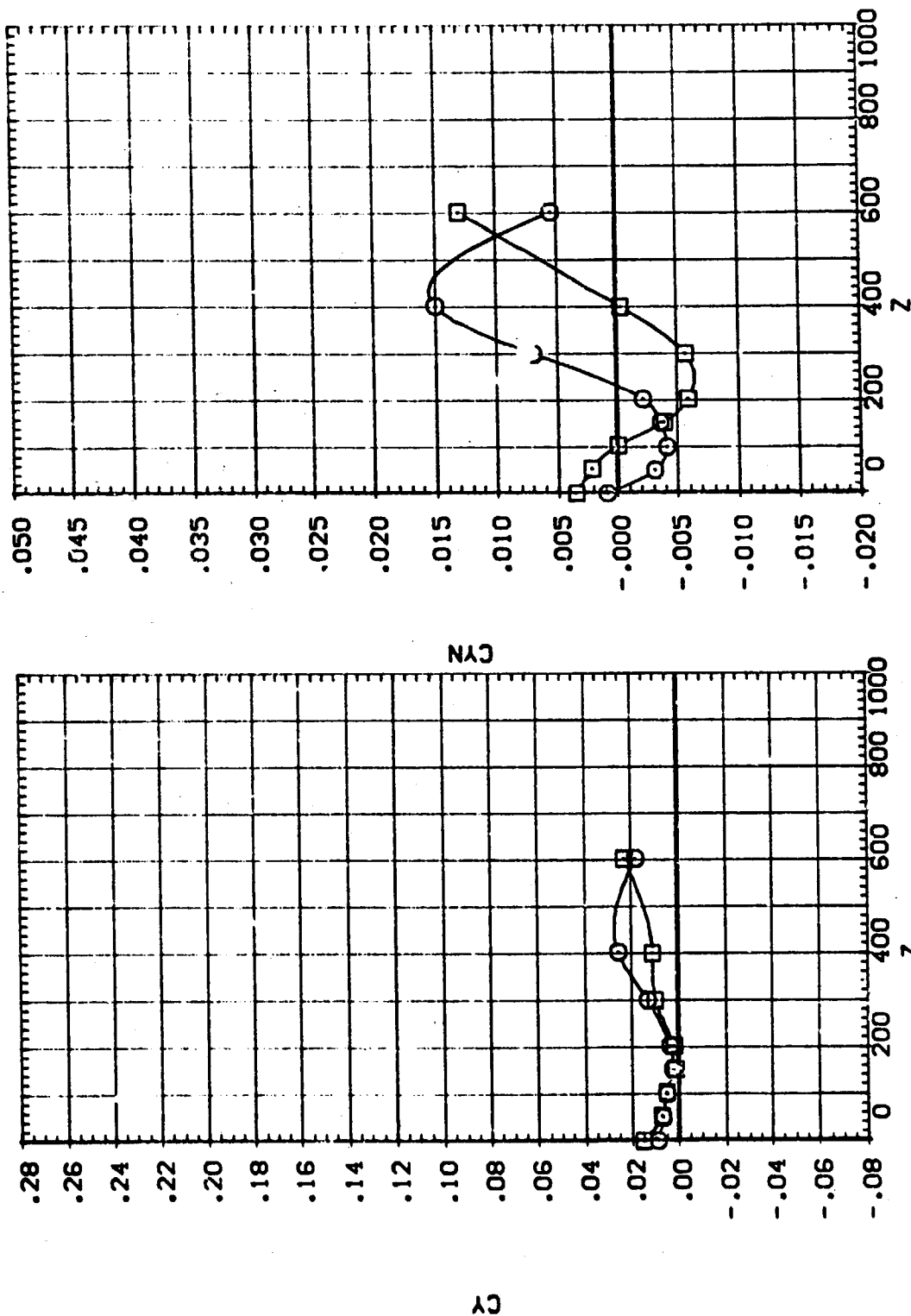


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ358)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| | | | | | |
|--------|---|-------------------|-------|--------|----------|
| SYMBOL | X | PARAMETRIC VALUES | | | |
| | | MACH | 4.510 | PTOTAL | 28.900 |
| | | ALPHA | .000 | BETA | .000 |
| | | DALPHA | 5.000 | DBETA | .000 |
| | | Y | .000 | PCMBR | 1500.000 |

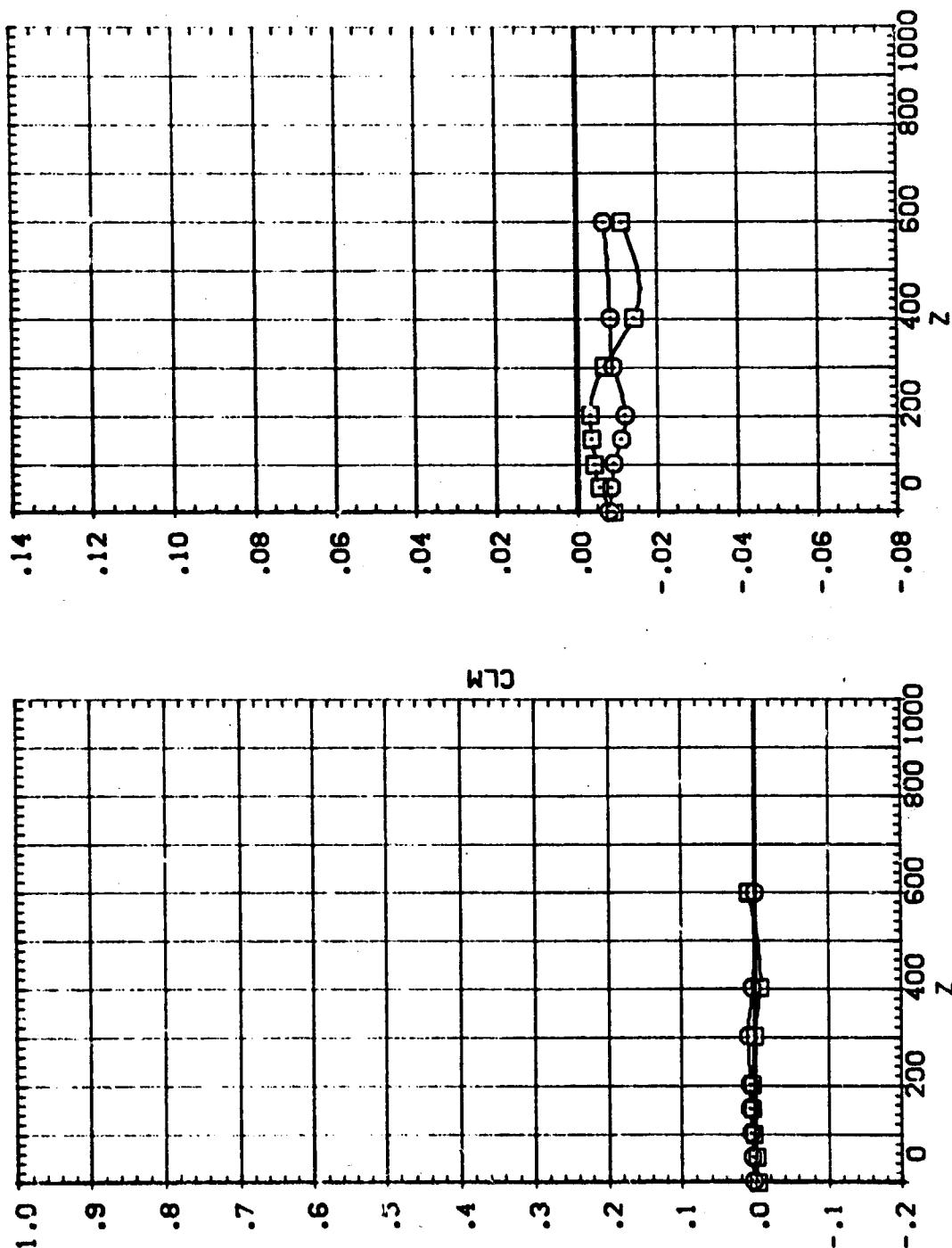


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM ORBIT (RTJ359)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|----------|
| | | MACH | POTIAL | BETA | PC-MER |
| ○ | .259 | 4.510 | 28.900 | .000 | |
| □ | 900.700 | 5.000 | 5.000 | .000 | 1500.000 |



[A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ359)

SYMBOL

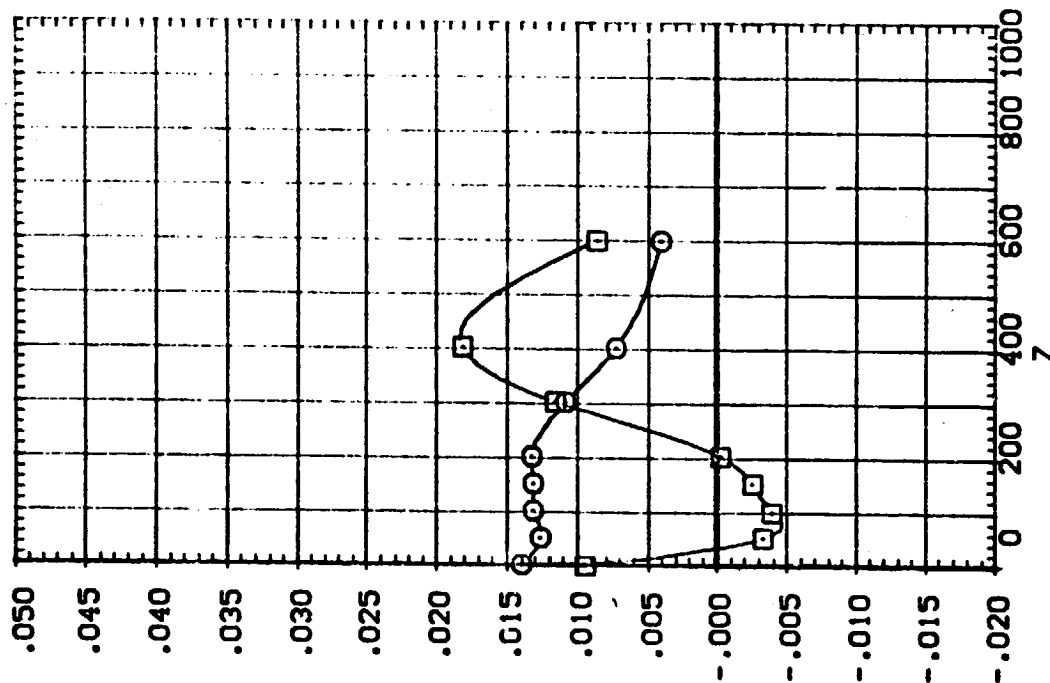
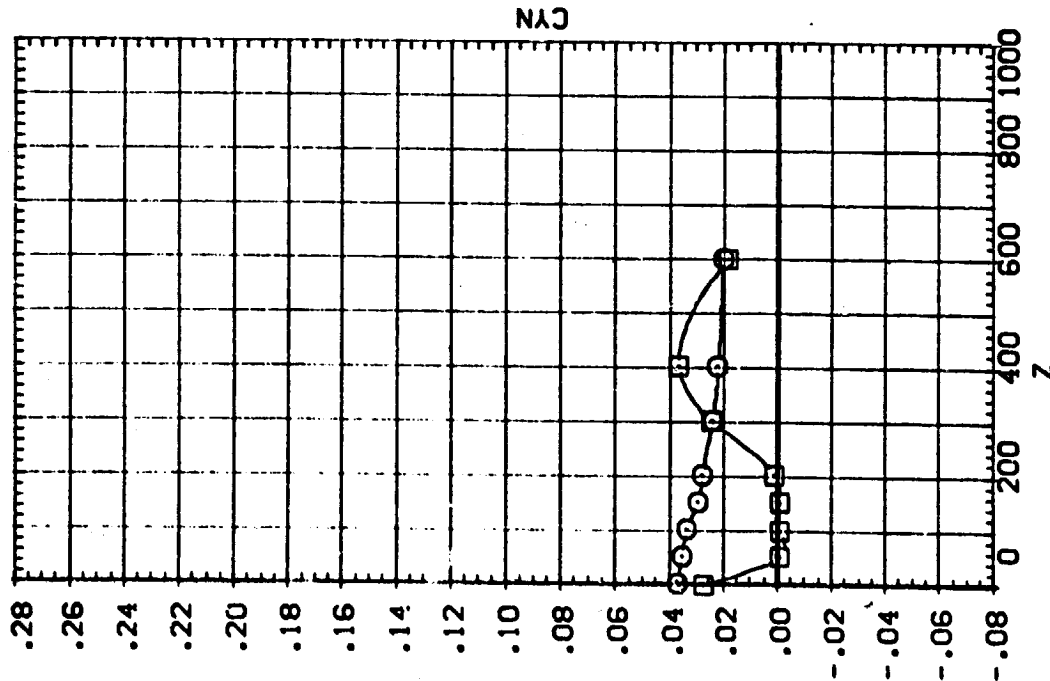
X

□

PARAMETRIC VALUES

| | | | |
|--------|---------|--------|----------|
| MACH | 4.510 | PTOTAL | 28.900 |
| ALPHA | .000 | BETA | .000 |
| DALPHA | 5.000 | DBETA | .000 |
| Y | 200.000 | PC-HR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ360)

SYMBOL

x

05

05

PARAMETRIC VALUES

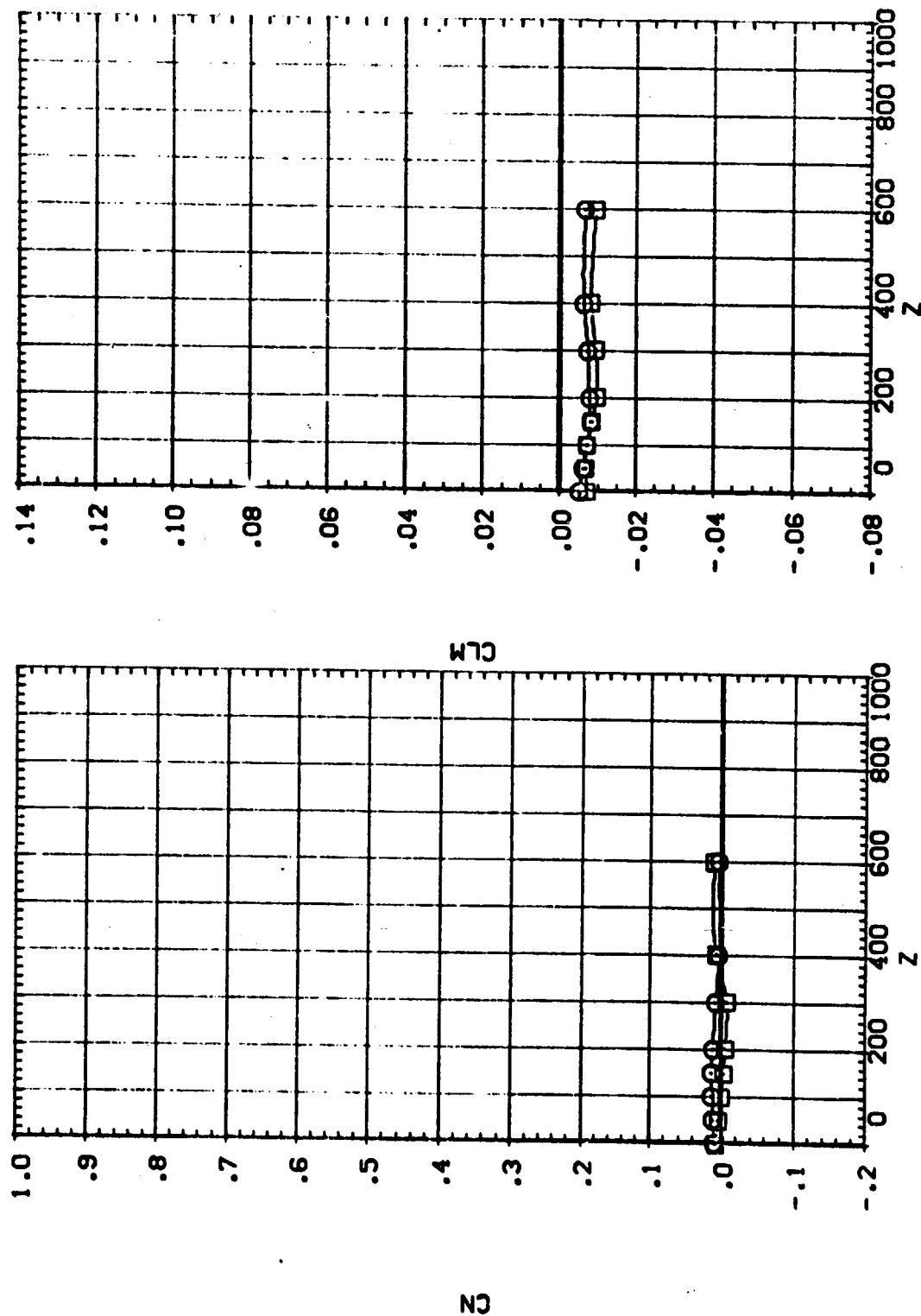
| | | | |
|--------|---------|--------|----------|
| MACH | 4.510 | PTOTAL | 28.900 |
| ALPHA | .000 | BETA | .000 |
| DALPHA | 5.000 | DBETA | .000 |
| Y | 400.000 | PC+PB | 1500.000 |

4.510

000' 000' BETA 000' 000'

| DEBIT | CREDIT |
|-------|--------|
| 5,000 | 5,000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

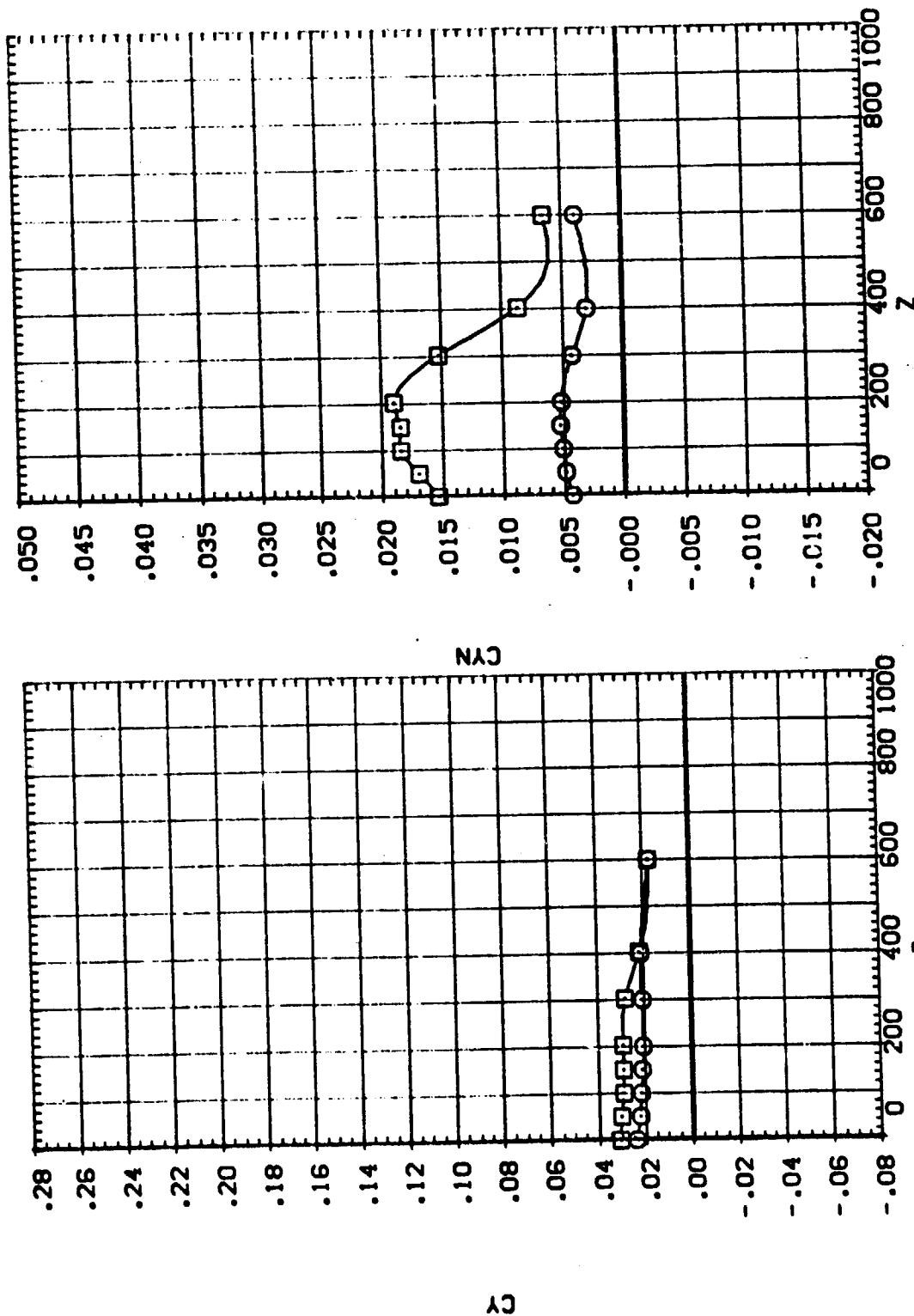


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ360)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL X MACH PARAMETRIC VALUES
 O 900.740 .305 4.510 PTOTAL 28.900
 □ ALPHA .000 BETA .000
 Y 400.000 5.000 DBETA .000
 POWER 1500.000

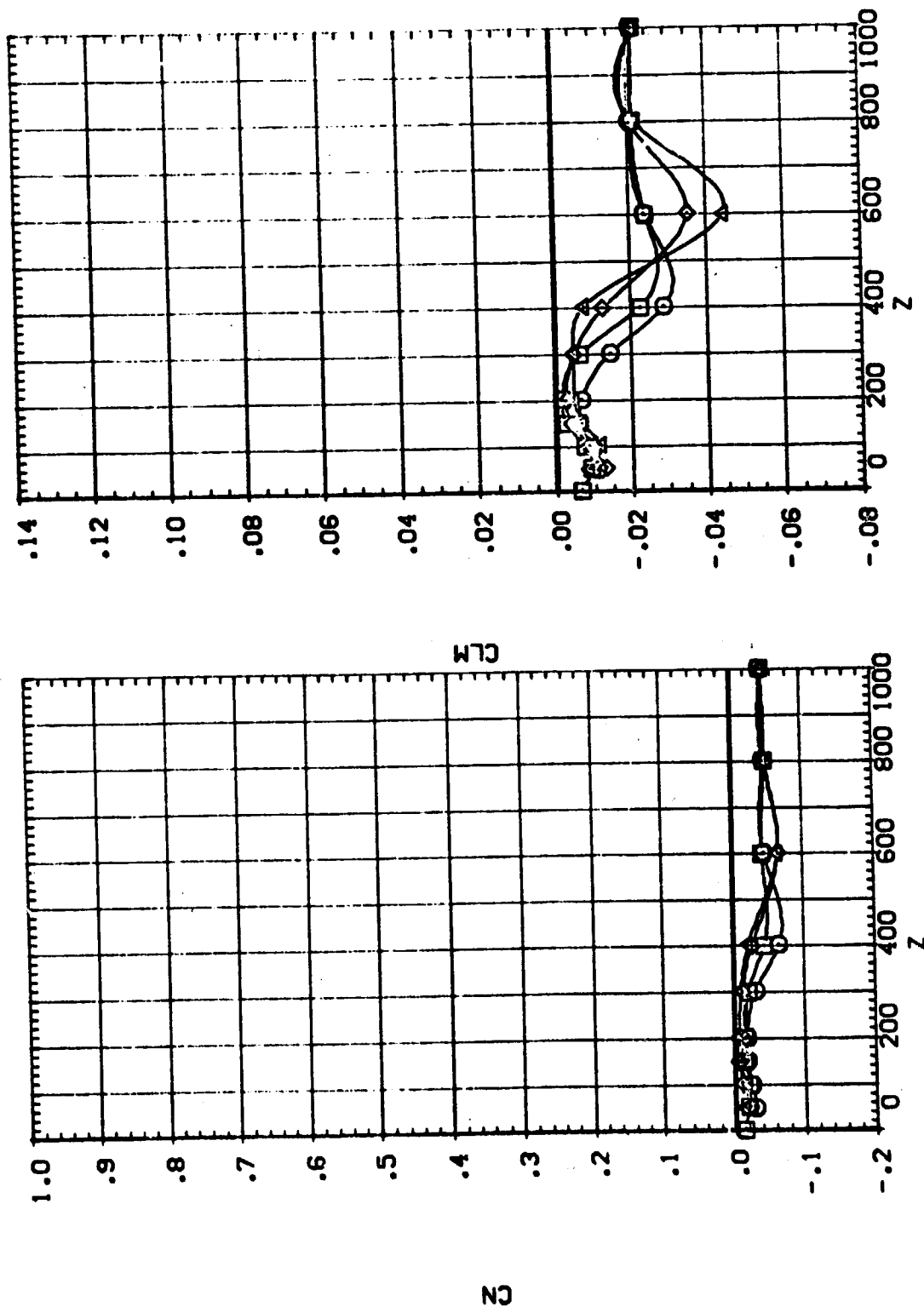


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ361)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

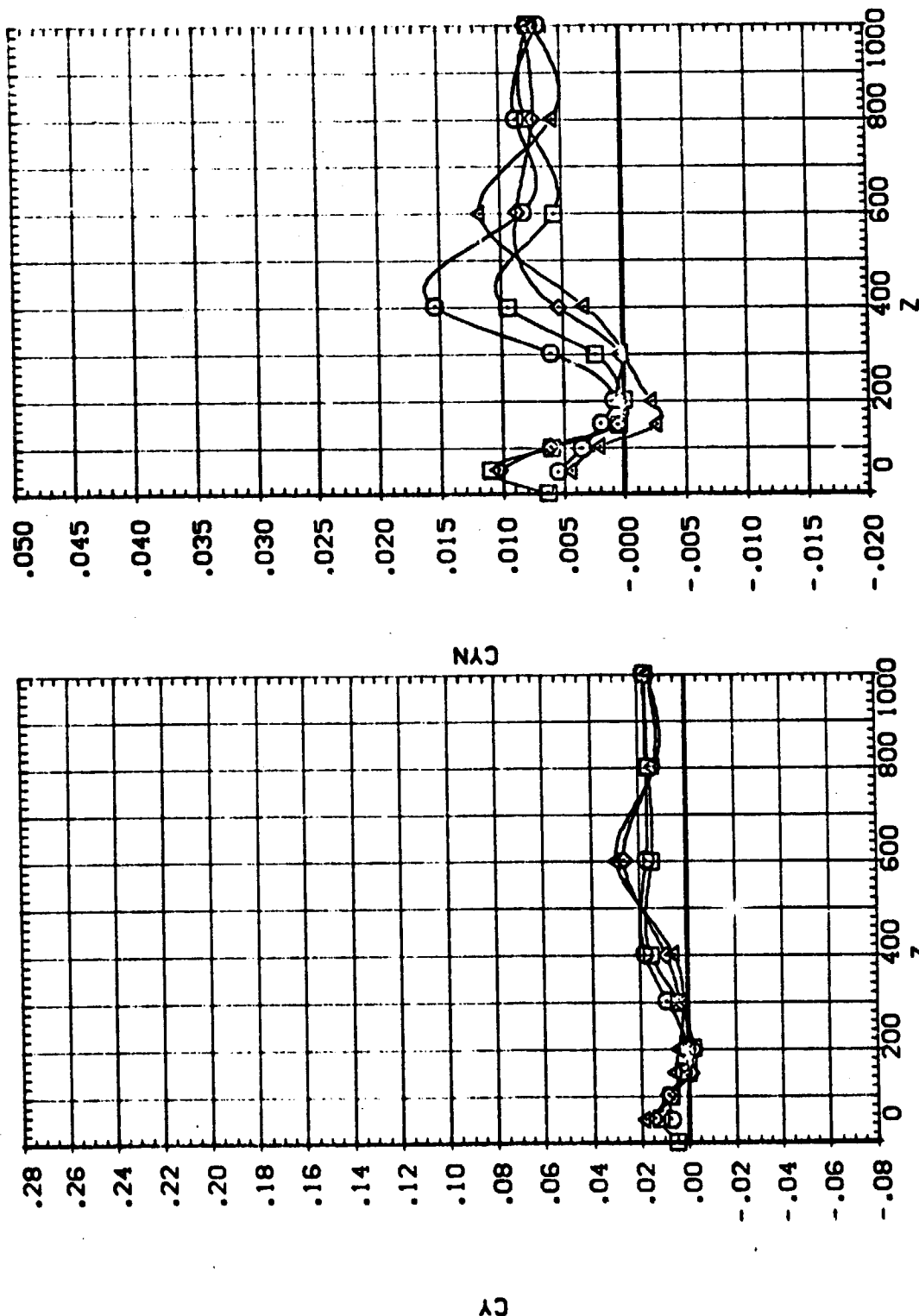
| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|--------|--------|----------|--|
| | | MACH | 4.510 | PTOTAL | 28.900 | |
| ○ | 300.540 | ALPHA | .000 | BETA | .000 | |
| □ | 600.690 | ALPHA | -5.000 | DBETA | .000 | |
| △ | 900.840 | Y | .000 | PC-HBR | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RIJ361)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH PARAMETRIC VALUES
300.540 .426 4.510 PTOTAL 28.900
600.690 .540 .000 BETA .000
900.840 .690 -5.000 DBETA .000
Y PC+PR 1500.000

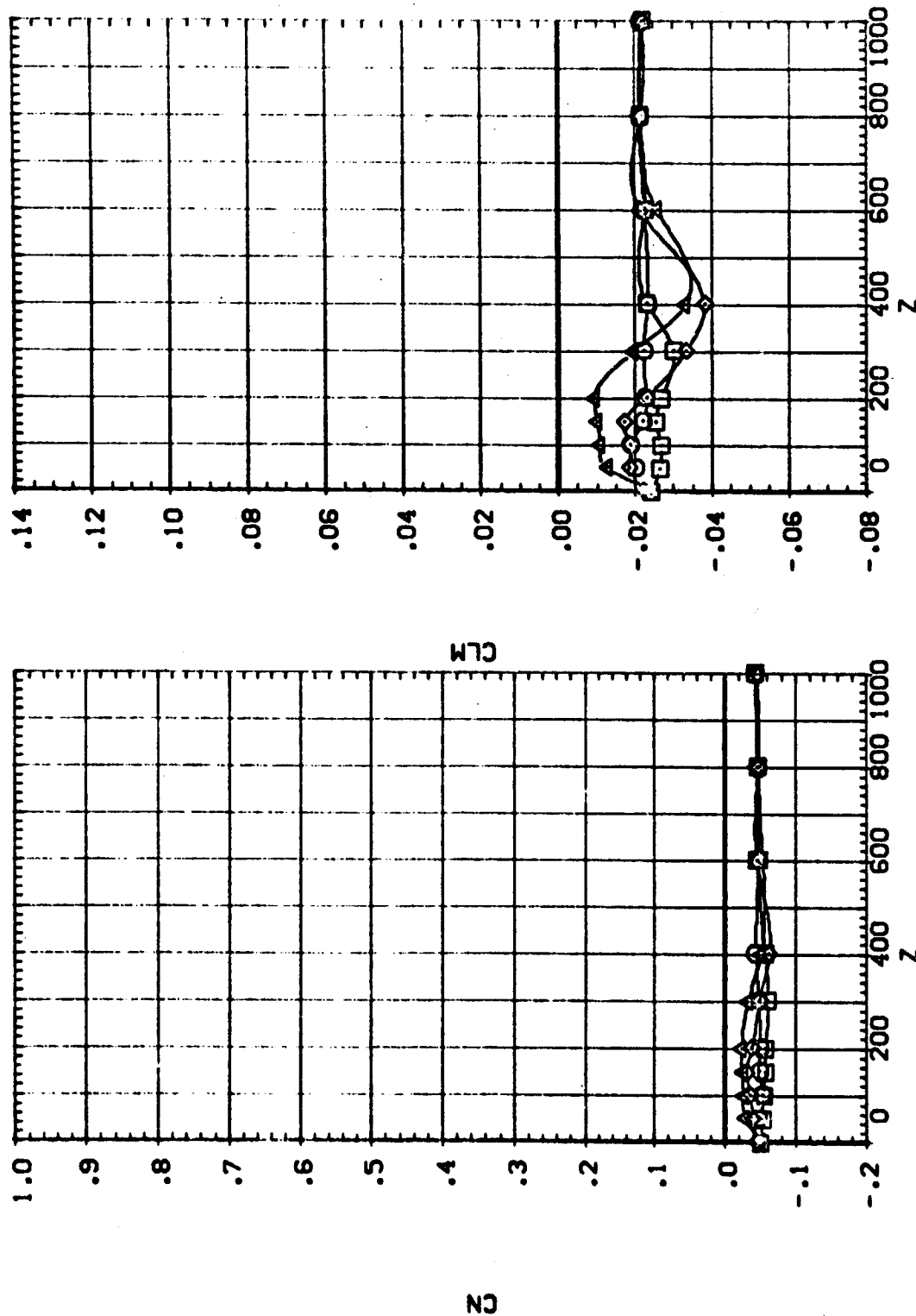


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RIJ362)

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| ○ | 300.410 | ALPHA | .000 | BETA | .000 |
| □ | 600.800 | DALPHA | -5.000 | DBETA | .000 |
| ◇ | 900.760 | Y | 200.000 | POWER | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



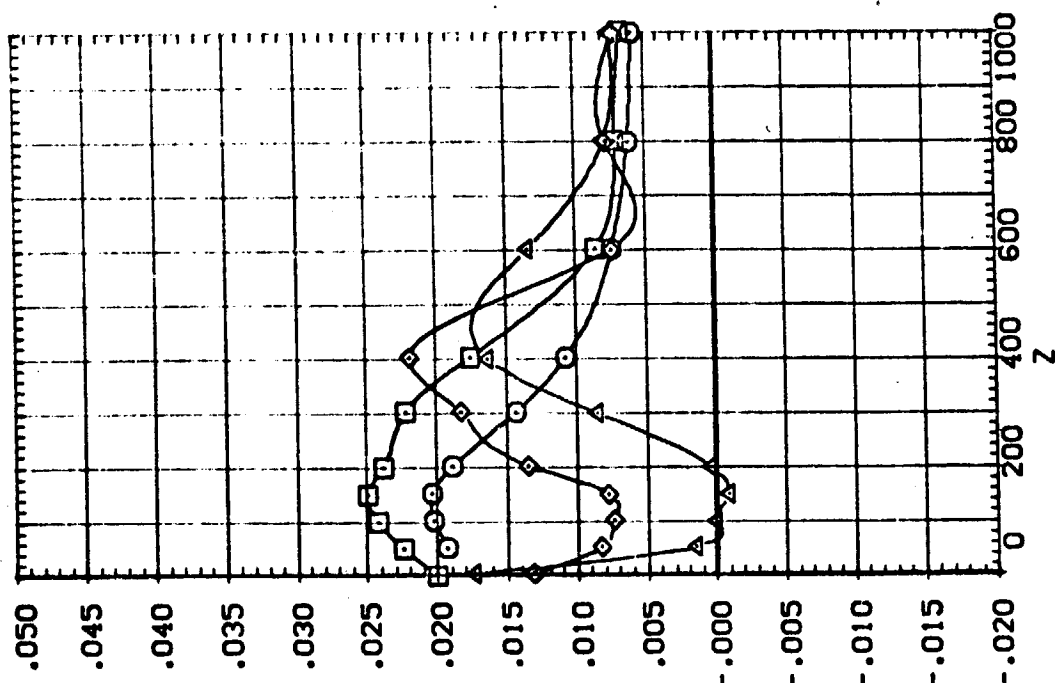
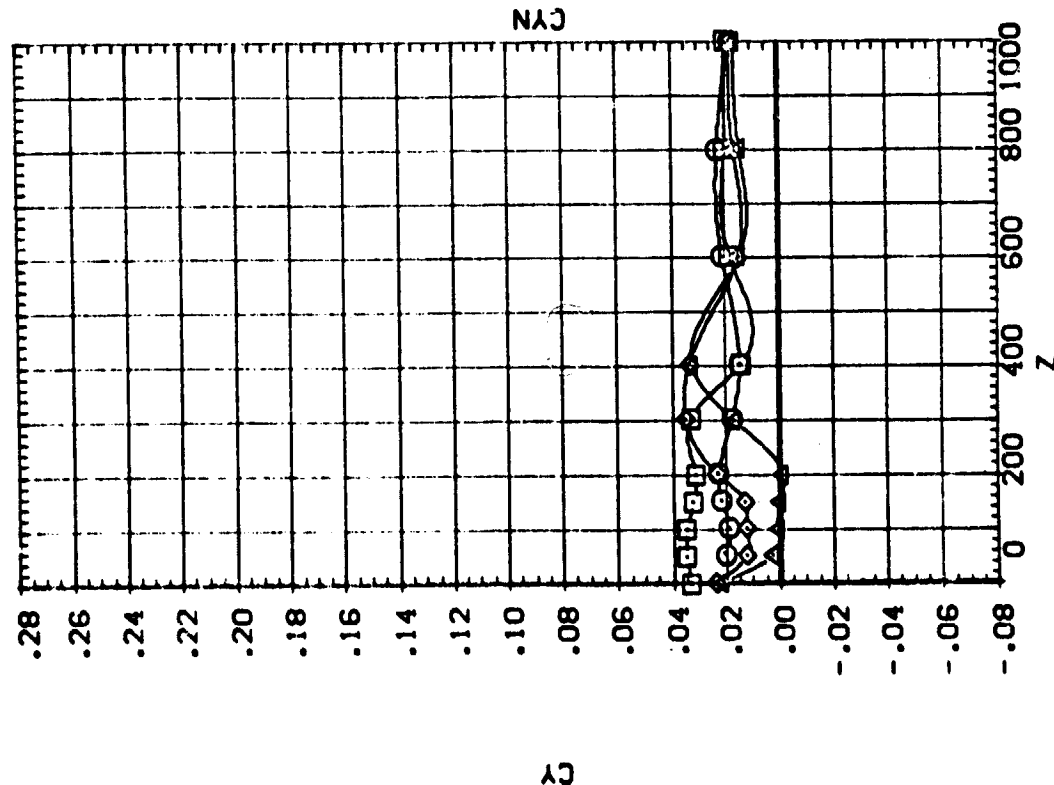
!A13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ362)

SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | 28.900 |
|----------|---------|--------|----------|
| 30.1.410 | .000 | BETA | .000 |
| 600.600 | -5.000 | DBETA | .000 |
| 900.76C | 200.000 | PC-HSR | 1500.000 |



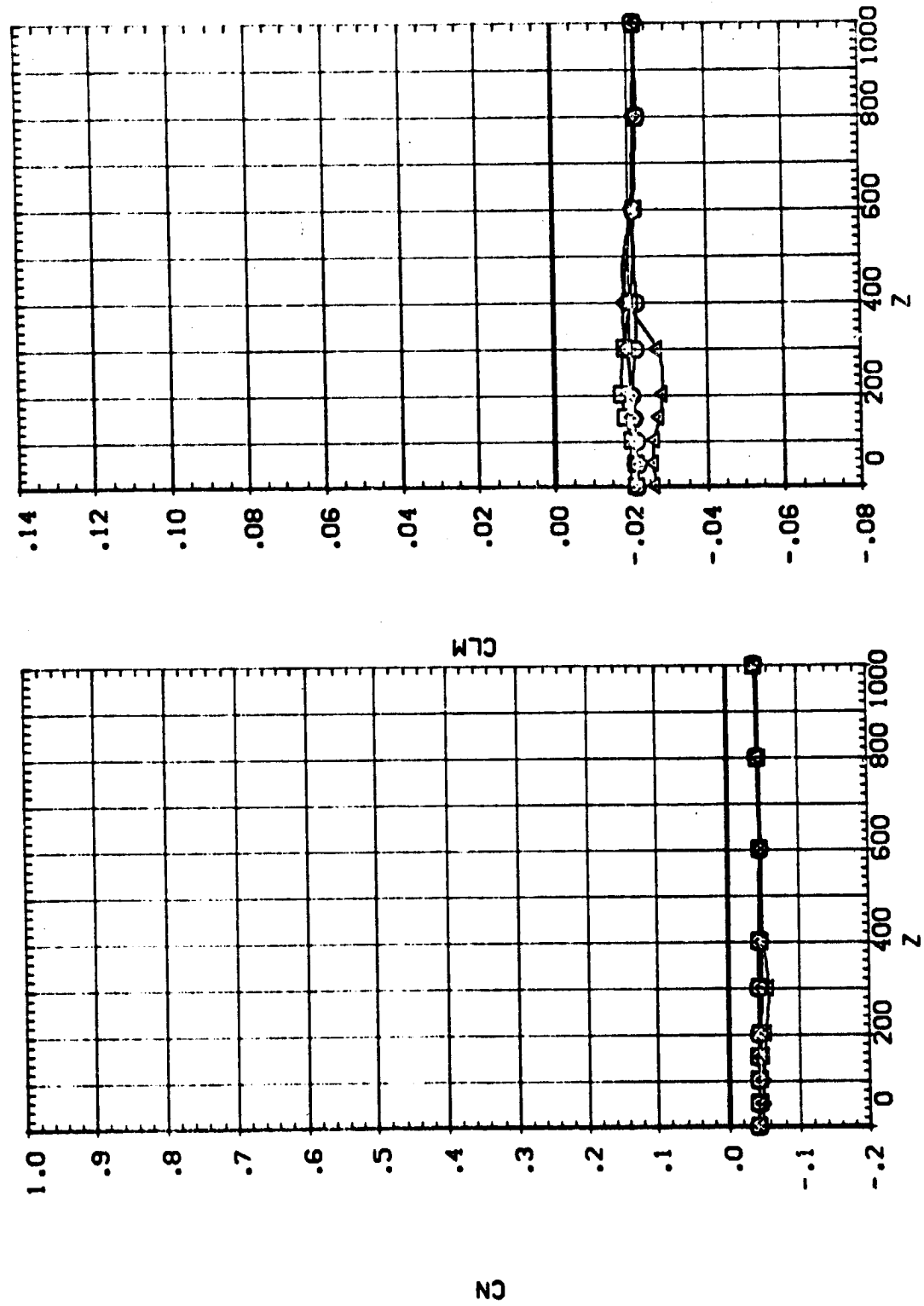
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ363)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| ○ | 300.450 | ALPHA | .000 | BETA | .000 |
| □ | 600.470 | DALPHA | -5.000 | DBETA | .000 |
| ◇ | 900.750 | Y | 400.000 | PC#8R | 1500.000 |



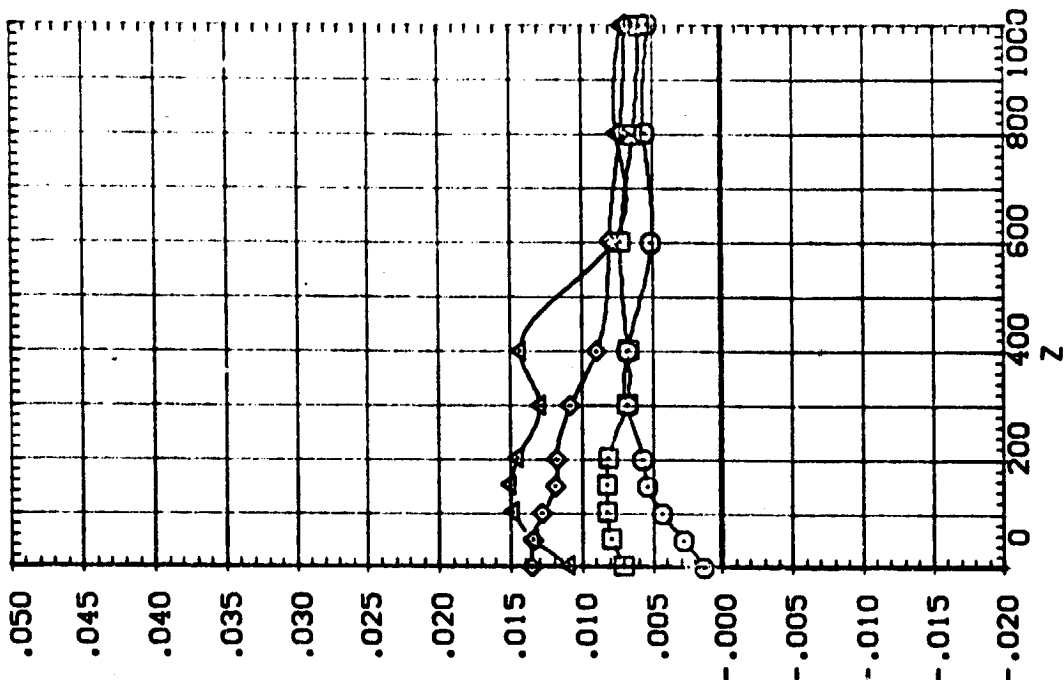
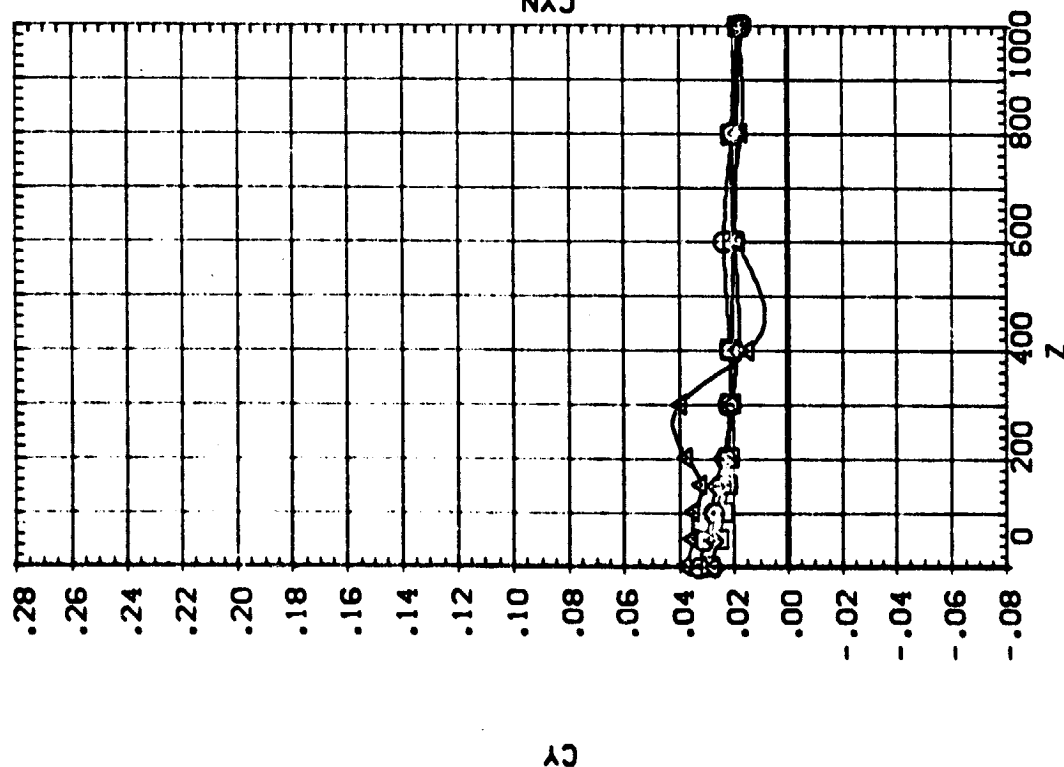
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| | MACH | PTOTAL | 28.900 |
|---------|--------|--------|----------|
| 300.450 | .000 | BETA | .000 |
| 600.470 | -5.000 | DBETA | .000 |
| 900.750 | Y | PC-MBR | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



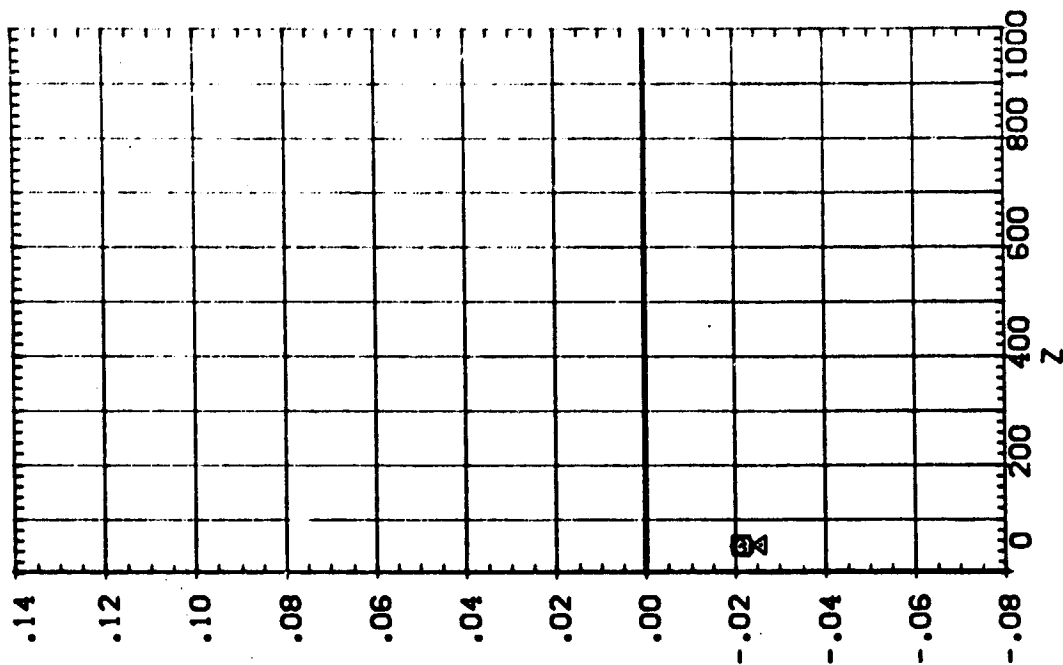
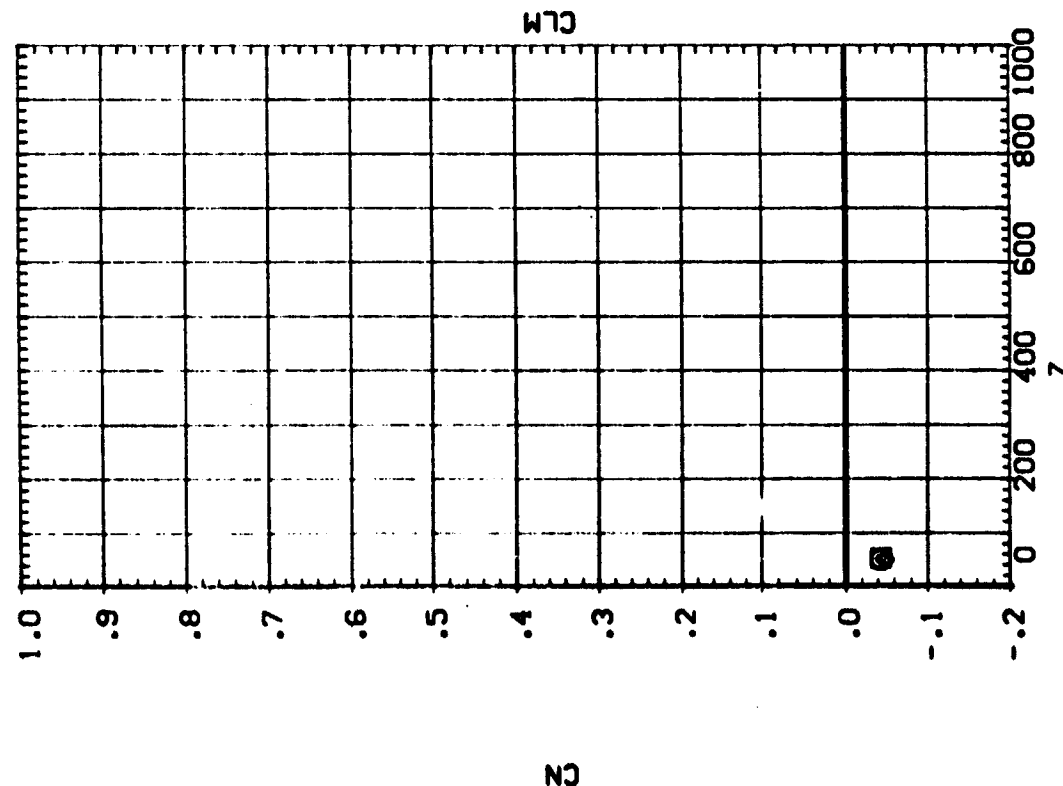
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ364)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | PTOTAL | 28.900 | |
| ○ | 300.460 | ALPHA | .000 | BETA | .000 | |
| □ | 600.570 | DALPHA | -5.000 | DBETA | .000 | |
| ◇ | 900.630 | Y | 800.000 | PC-HBR | 1500.000 | |

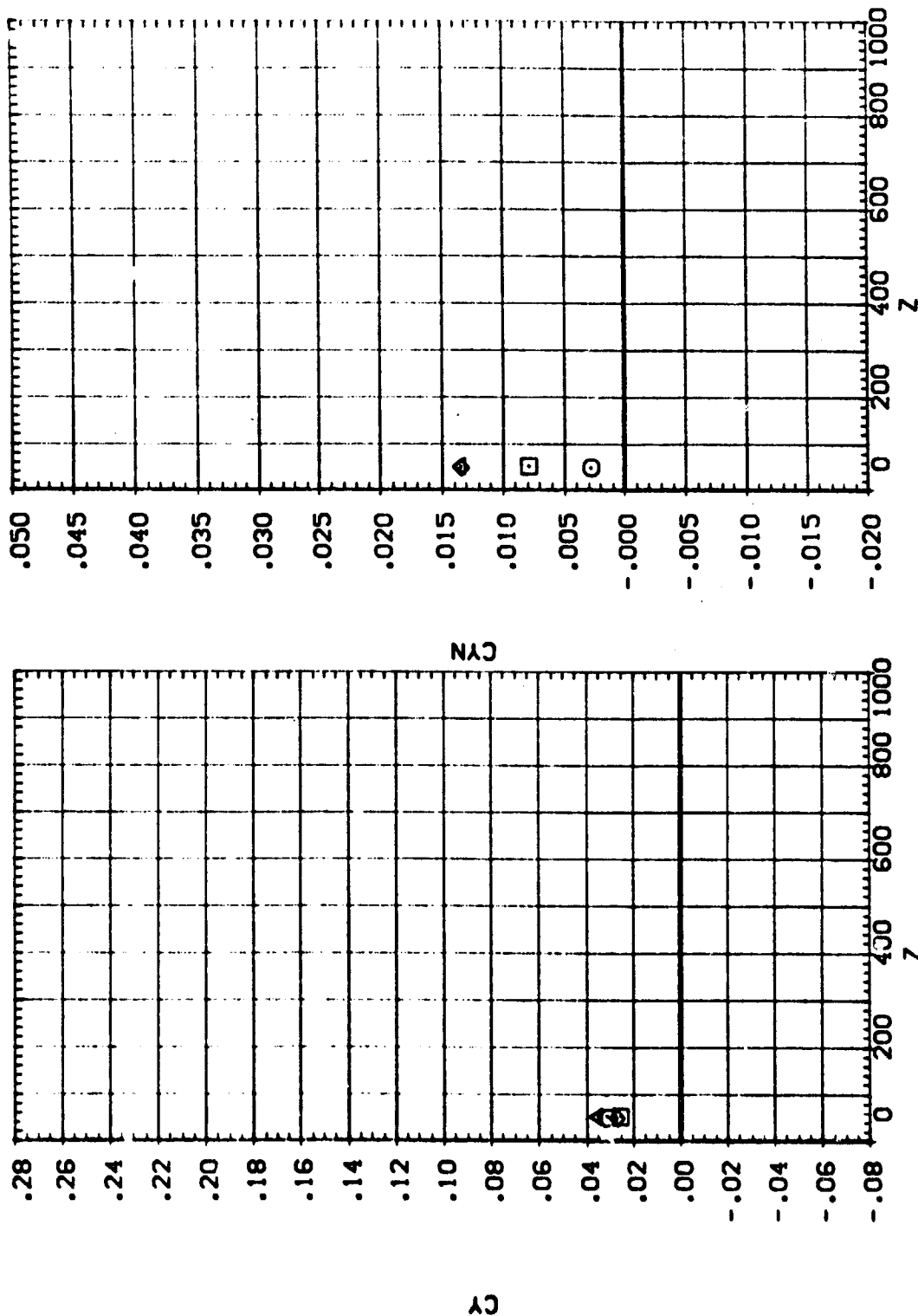


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ364)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | PTOTAL | 28.900 |
|--------|---------|-------|-------------------|--------|----------|
| ○ | .259 | ALPHA | .000 | BETA | .000 |
| □ | 300.460 | DELTA | -5.000 | DBETA | .000 |
| ◇ | 600.570 | Y | 800.000 | PC+PR | 1500.000 |
| △ | 900.630 | | | | |

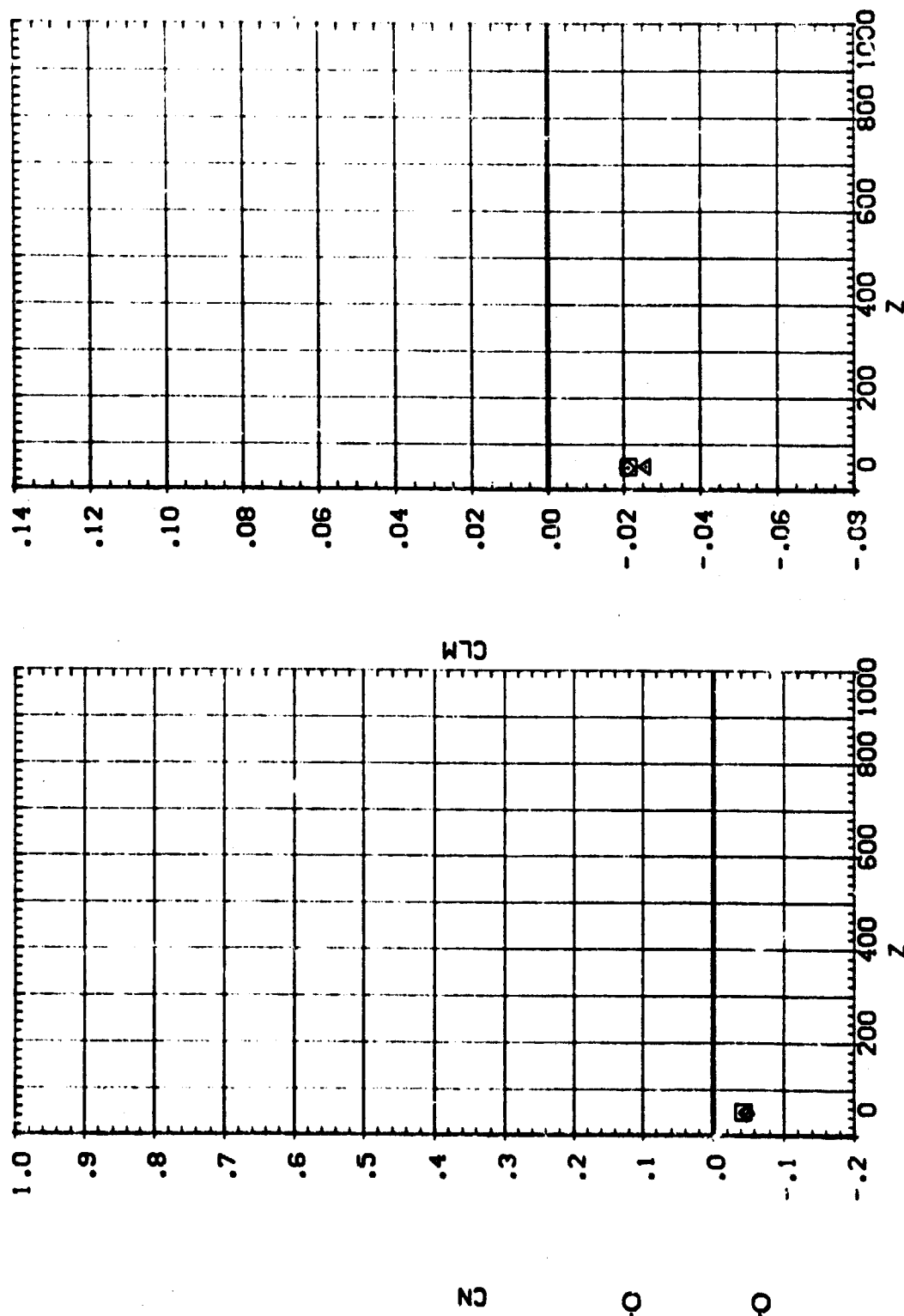


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM ORBIT (RIJ365)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|----------|
| | | MACH | 4.510 | P TOTAL | 28.900 |
| ○ | 300.430 | ALPHA | .000 | BETA | .000 |
| □ | 600.590 | DALPHA | -10.000 | DBETA | .000 |
| ◇ | 900.710 | Y | 800.000 | PC-MBR | 1500.000 |

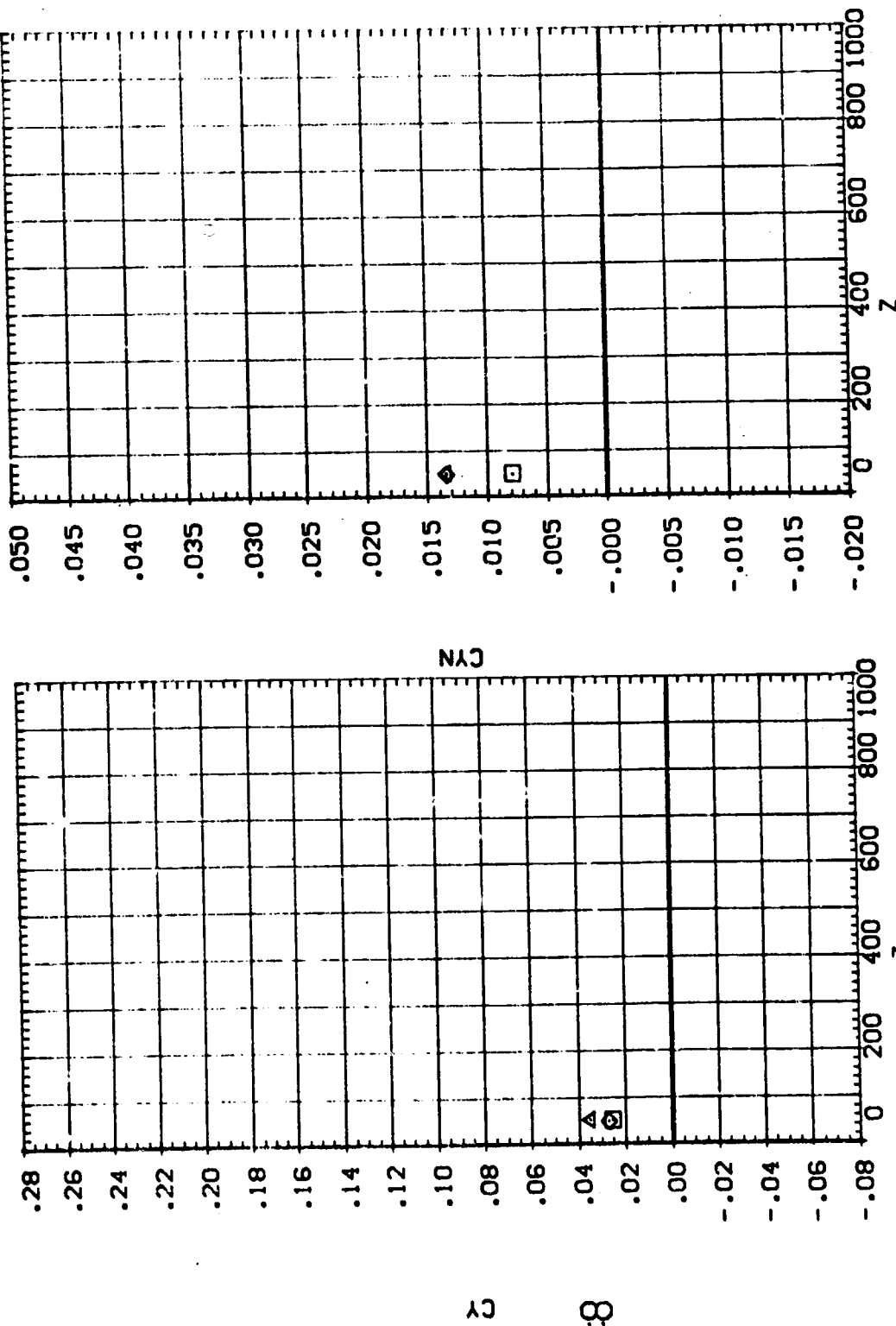


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ365)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| ○ | 300.430 | ALPHA | .000 | BETA | .000 |
| □ | 600.590 | DALPHA | -10.000 | DBETA | .000 |
| ◇ | 300.710 | Y | 600.000 | PCHGR | 1500.000 |

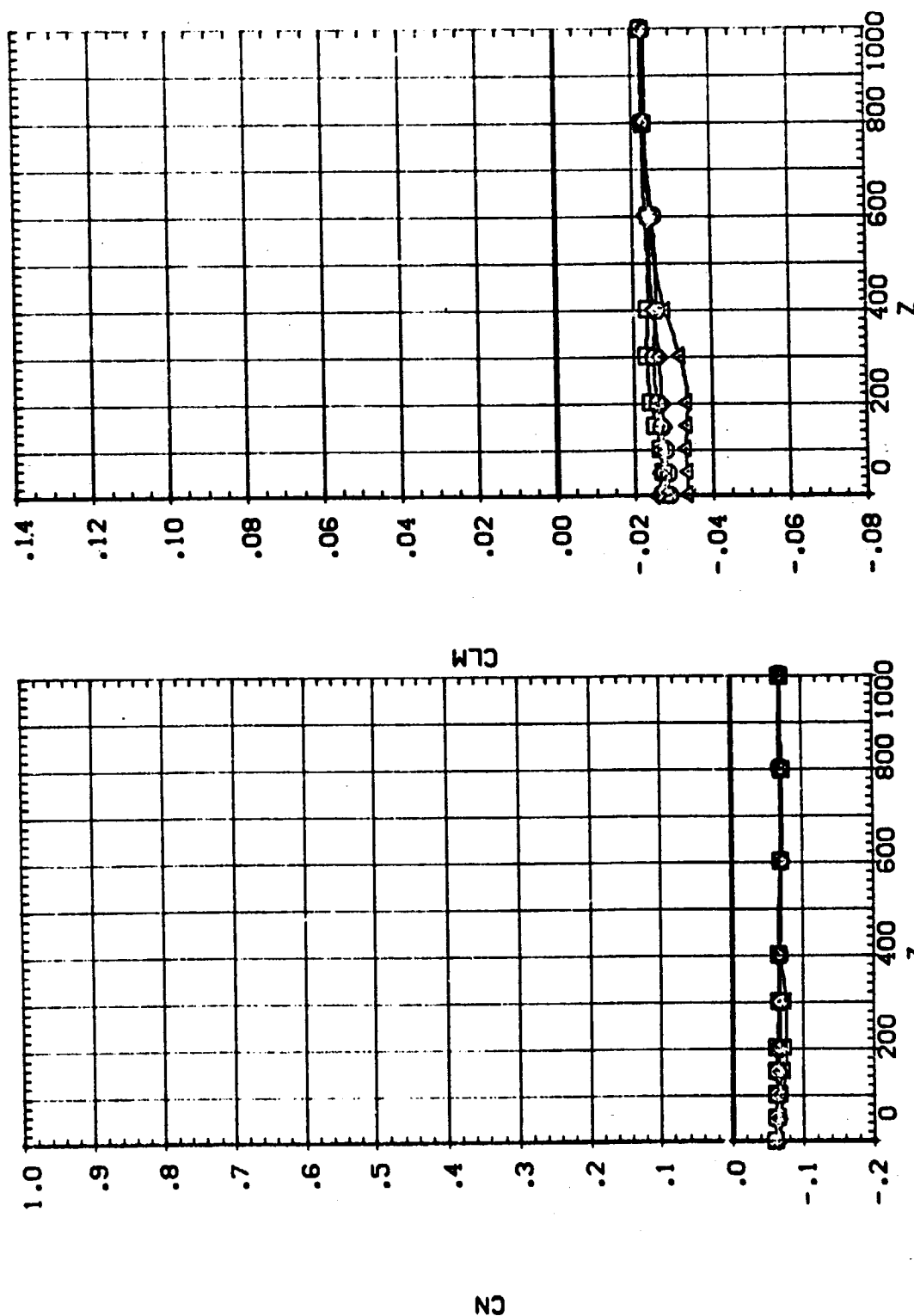


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ366)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|----------|
| ○ | X | MACH | 4.510 | P TOTAL | 28.500 |
| □ | 300.610 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.640 | DALPHA | -10.000 | DBETA | .000 |
| △ | 900.640 | Y | 400.000 | PCMBK | 1500.000 |

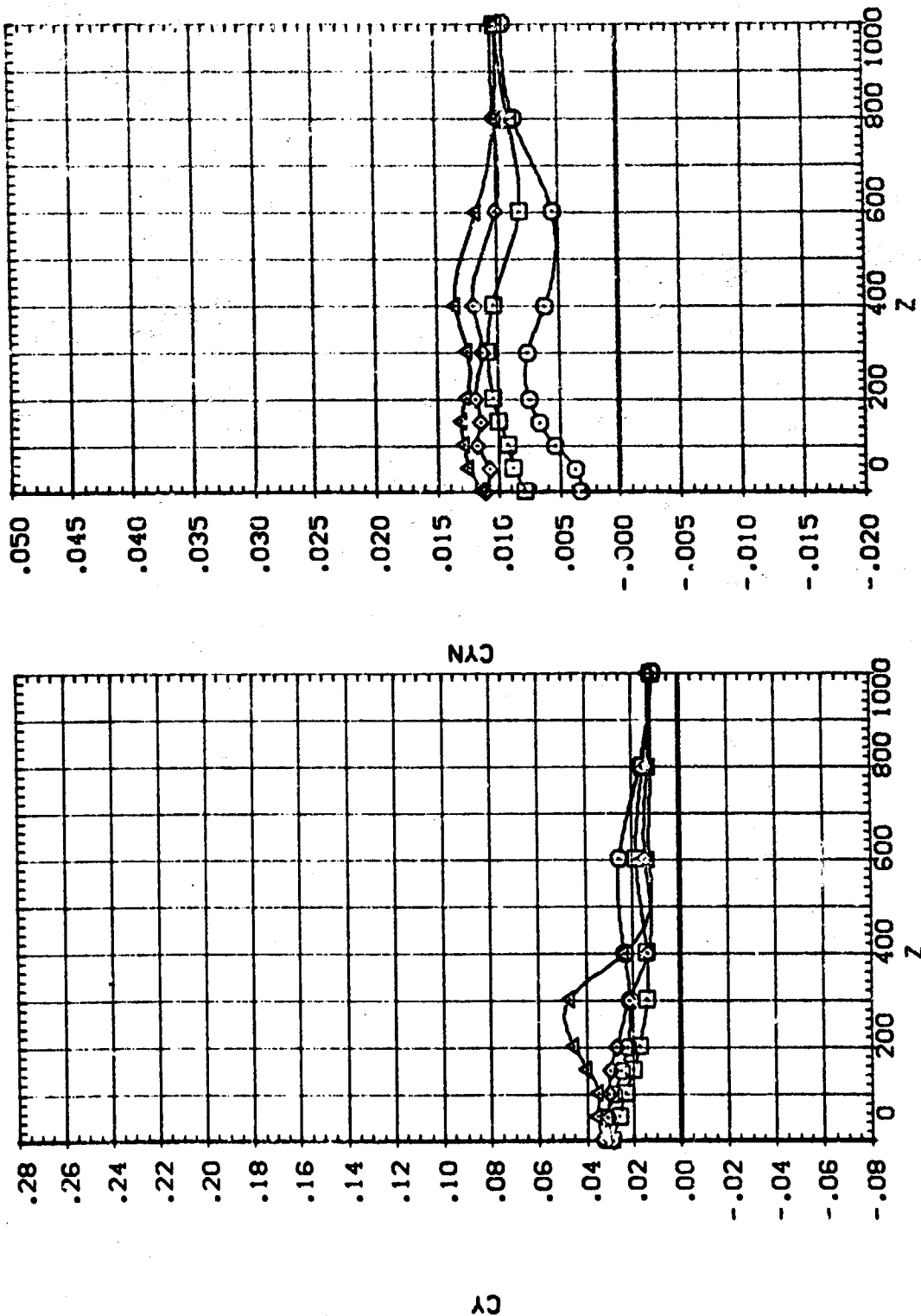


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RIJ366)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PTOTAL | 28.900 |
| □ | 300.610 | ALPHA | .000 | BETA | .000 |
| ◇ | 500.640 | DALPHA | -10.000 | DBETA | .000 |
| △ | 900.640 | Y | 400.000 | PC+PR | 1500.000 |

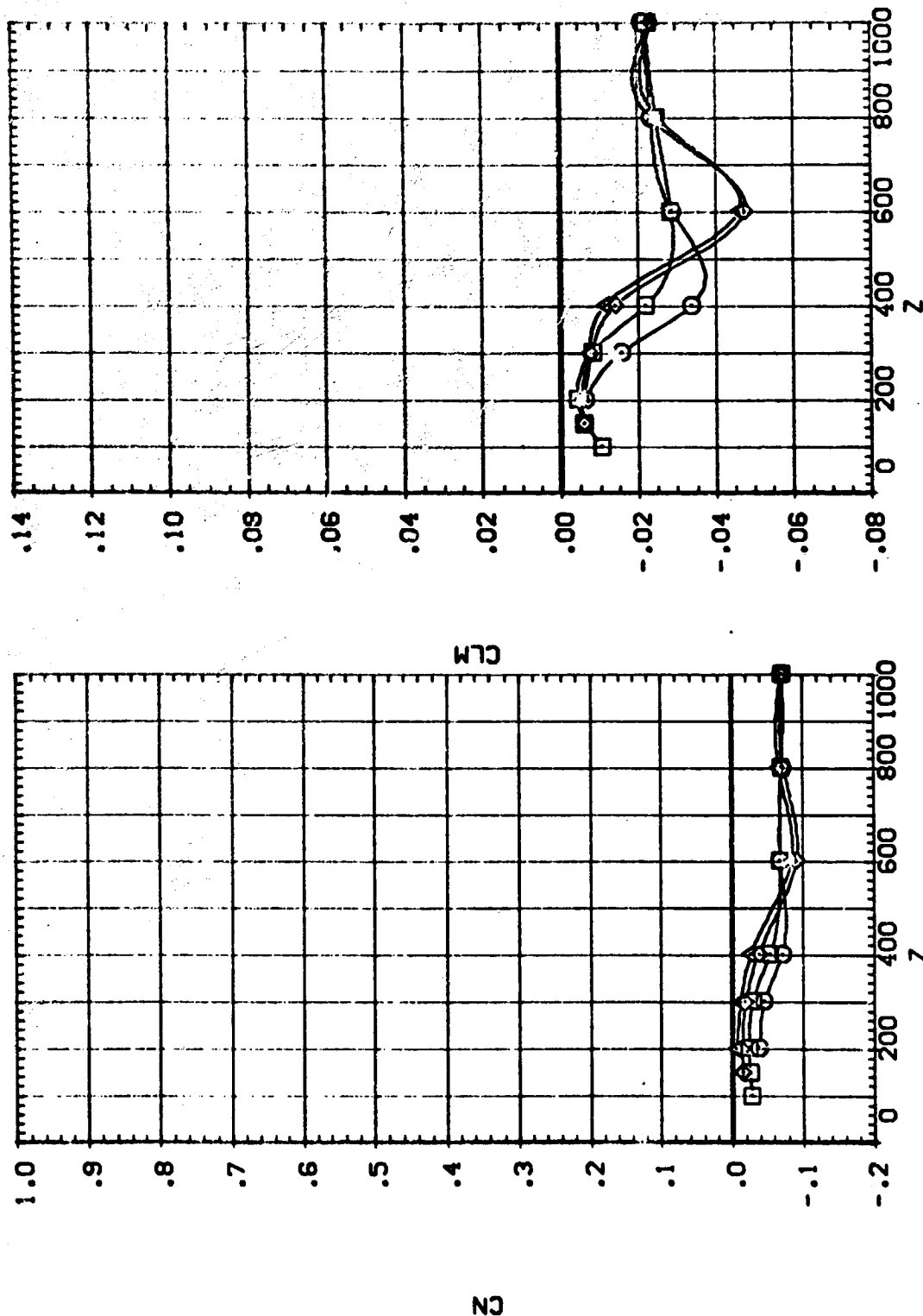


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

I113.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ367)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | |
|--------|---------|-------------------|----------|
| X | .246 | MACH | 4.510 |
| | 300.590 | ALPHA | .000 |
| | 600.550 | BETA | .000 |
| | 900.50 | PC-MBR | 1500.000 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

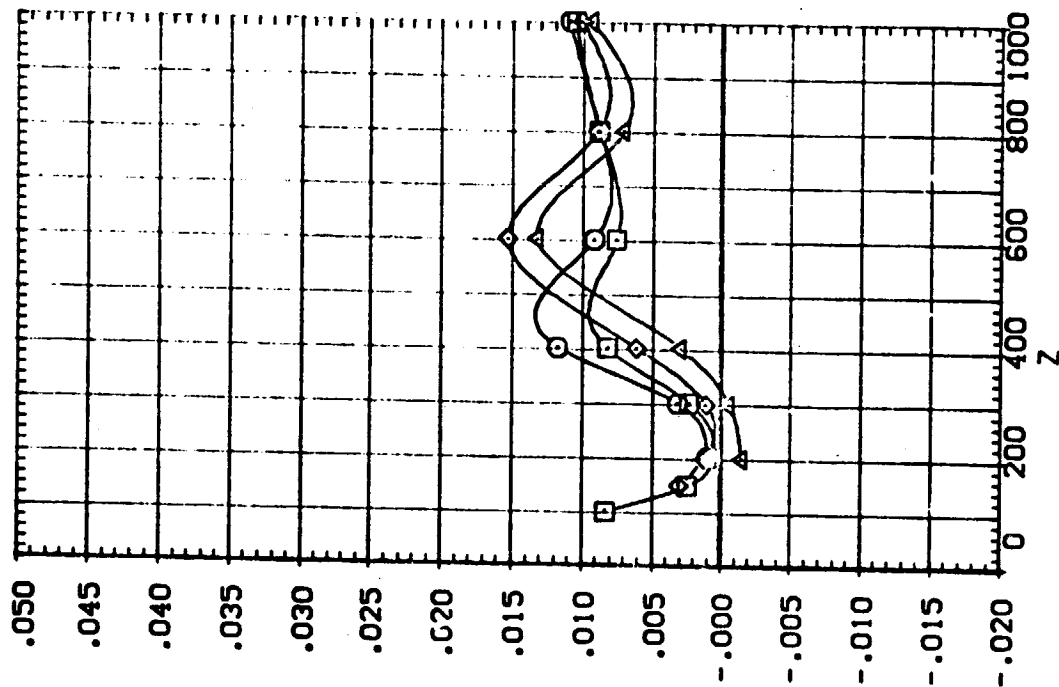
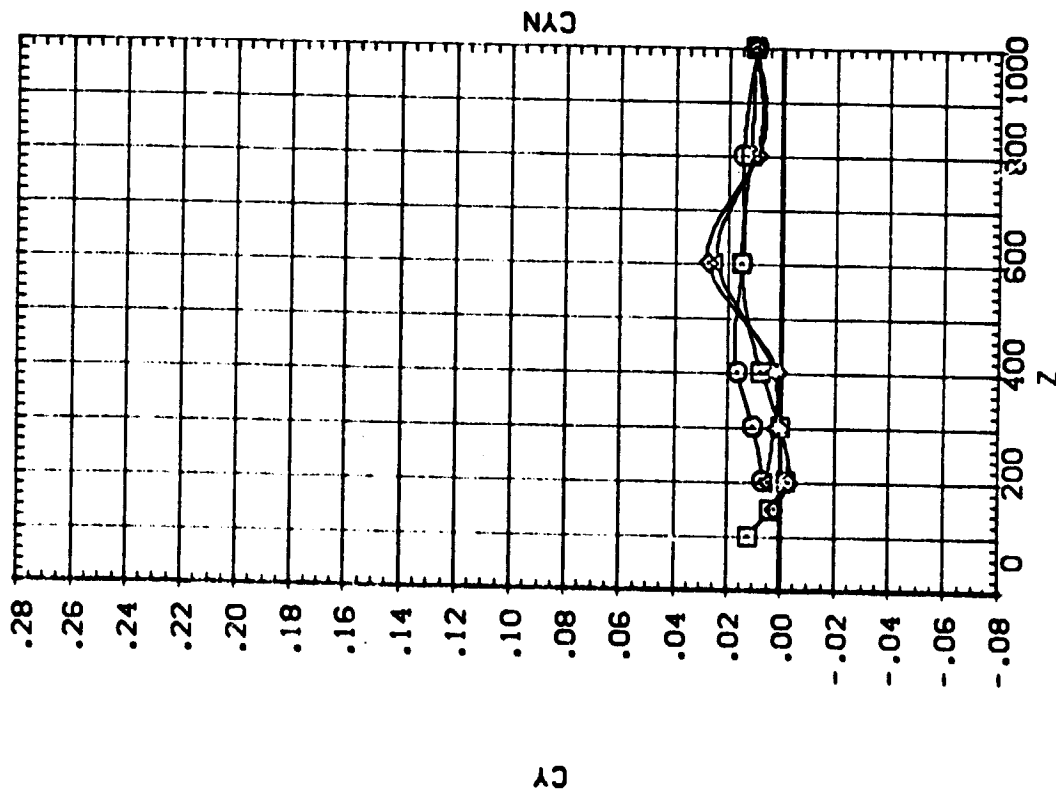
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ367)

SYMBOL X

○ □ ◇ △

PARAMETRIC VALUES
 MACH 4.510 PTOTAL 28.500
 ALPHA .000 BETA .000
 DALPHA -10.000 DBETA .000
 Y .000 PC-HGR 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



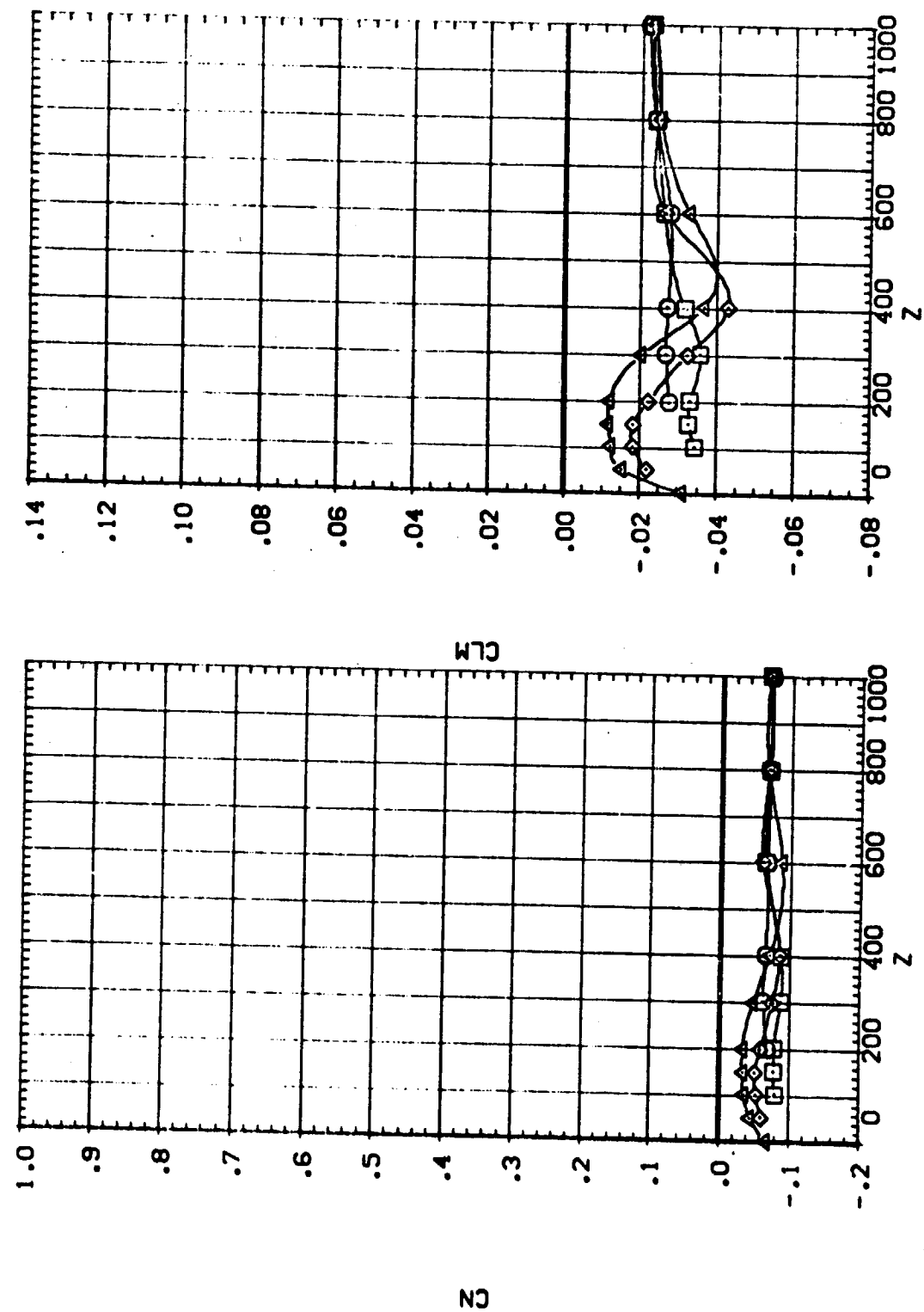
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ368)

SYMBOL X

PARAMETRIC VALUES
 .323 MACH
 300.300 ALPHA
 600.750 DALPHA
 900.950 Y
 4.510 PTOT.L
 .000 BETA
 -10.000 DBETA
 200.000 PC+PR
 28.900
 .000
 .000
 1500.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

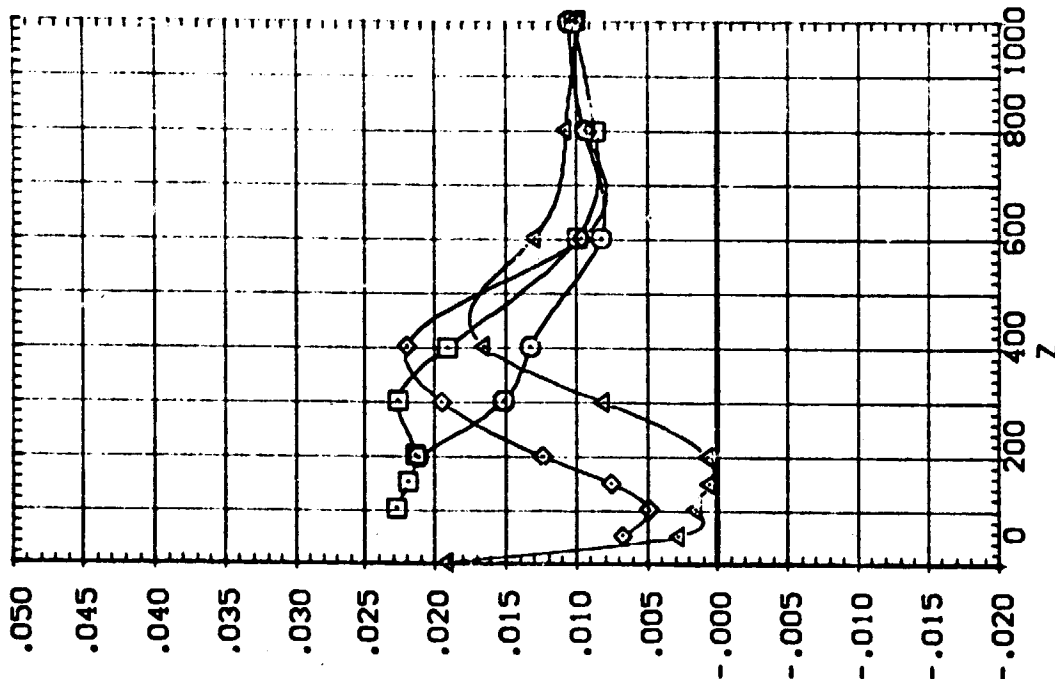
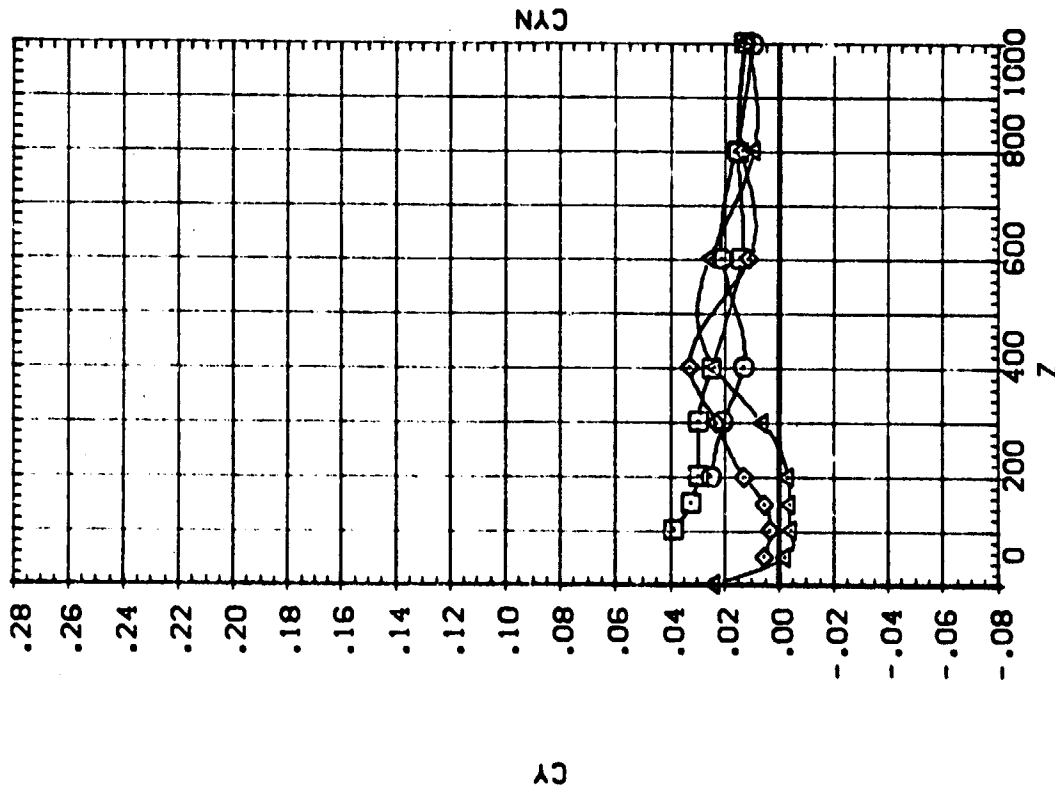


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SYMBOL
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 ◇
 △

PARAMETRIC VALUES
 MACH 4.510 P/TOTAL 28.900
 ALPHA .000 %ETA .000
 DALPHA -10.000 DBETA .000
 Y 200.000 PC-HR 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



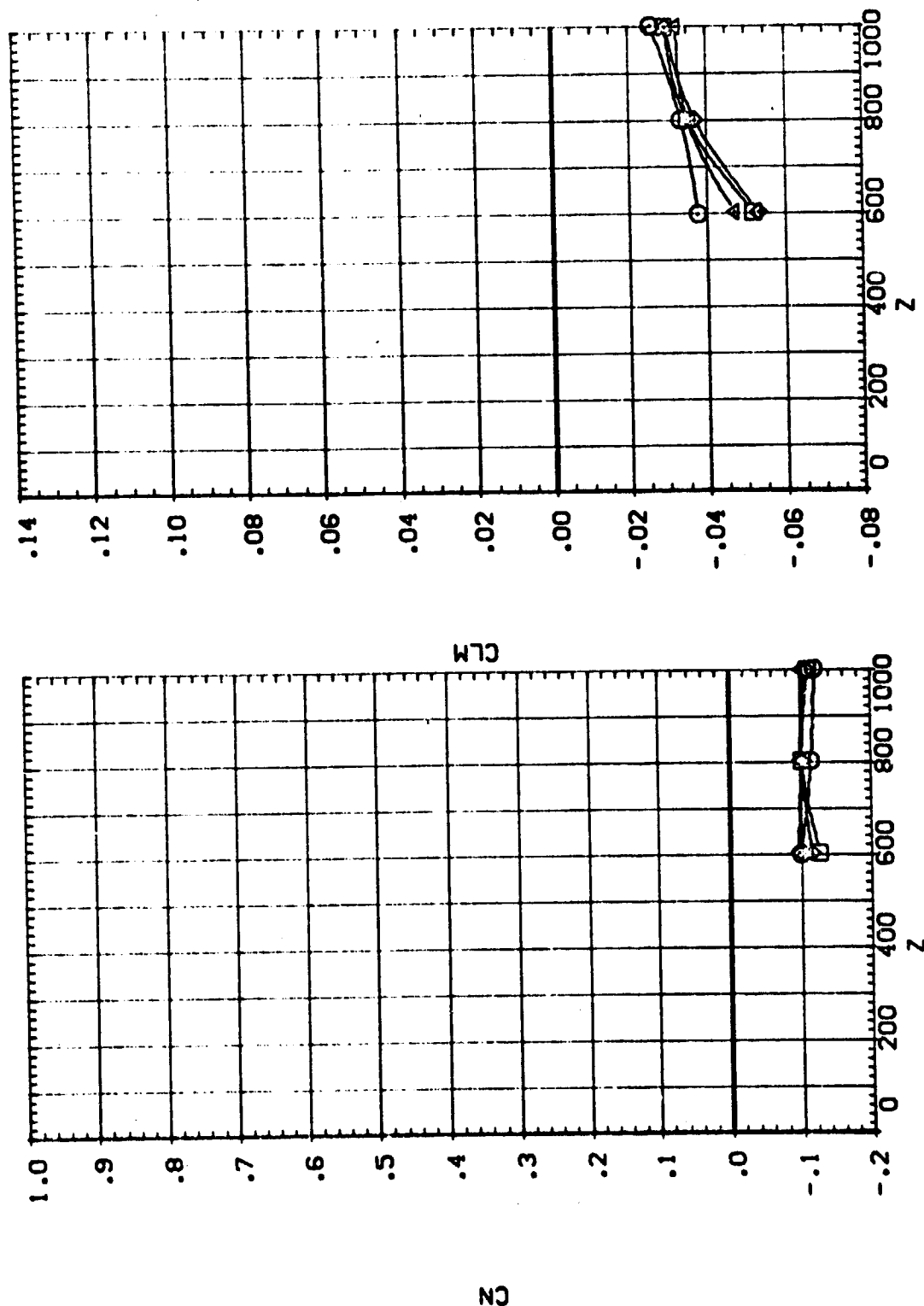
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ369)

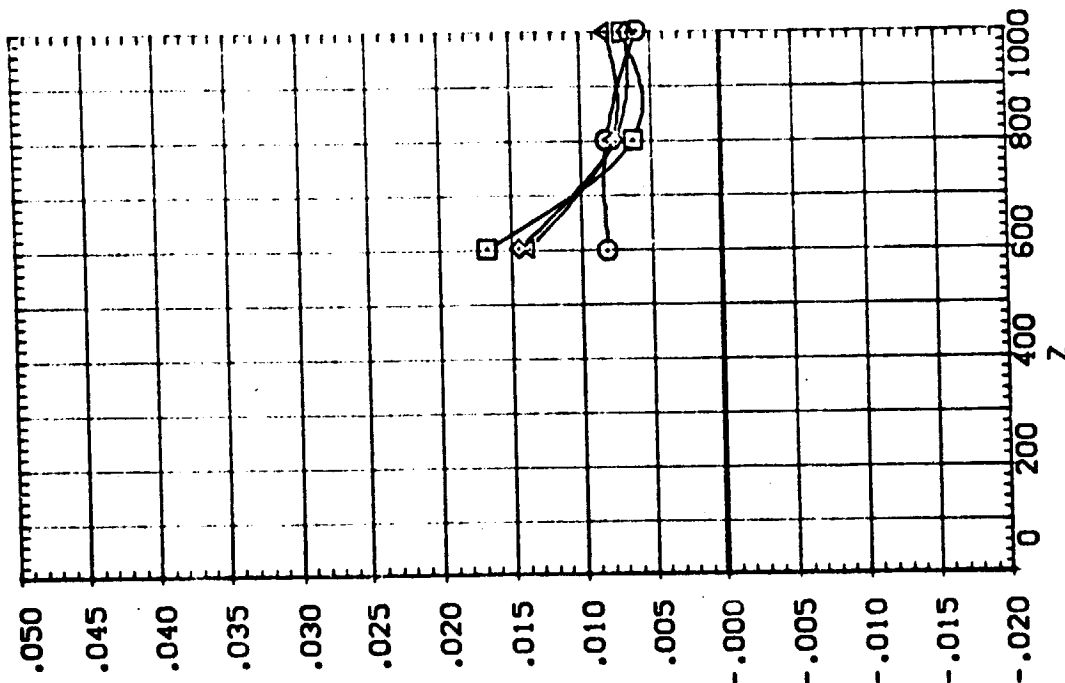
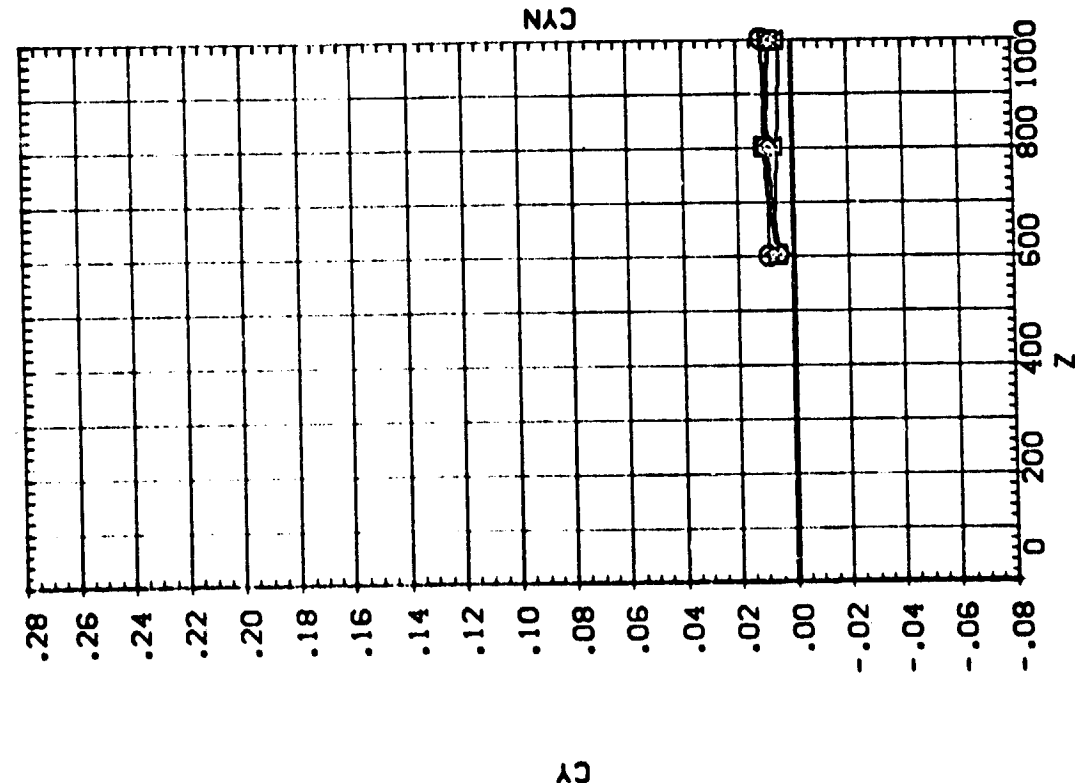
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|---------|----------|--|
| | | MACH | 4.510 | PITOTAL | 28.900 | |
| ○ | 300.050 | ALPHA | .000 | BETA | .000 | |
| □ | 600.300 | DALP-H | -20.000 | DBETA | .000 | |
| △ | 900.870 | Y | .000 | PC-HSR | 1500.000 | |



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|---------|----------|
| | | MACH | 4.510 | PITOTAL | 28.900 |
| ○ | 300.050 | ALPHA | .000 | BETA | .000 |
| □ | 600.300 | DALPHA | -20.000 | DBETA | .000 |
| ◇ | 900.870 | Y | .000 | PC-MER | 1500.000 |

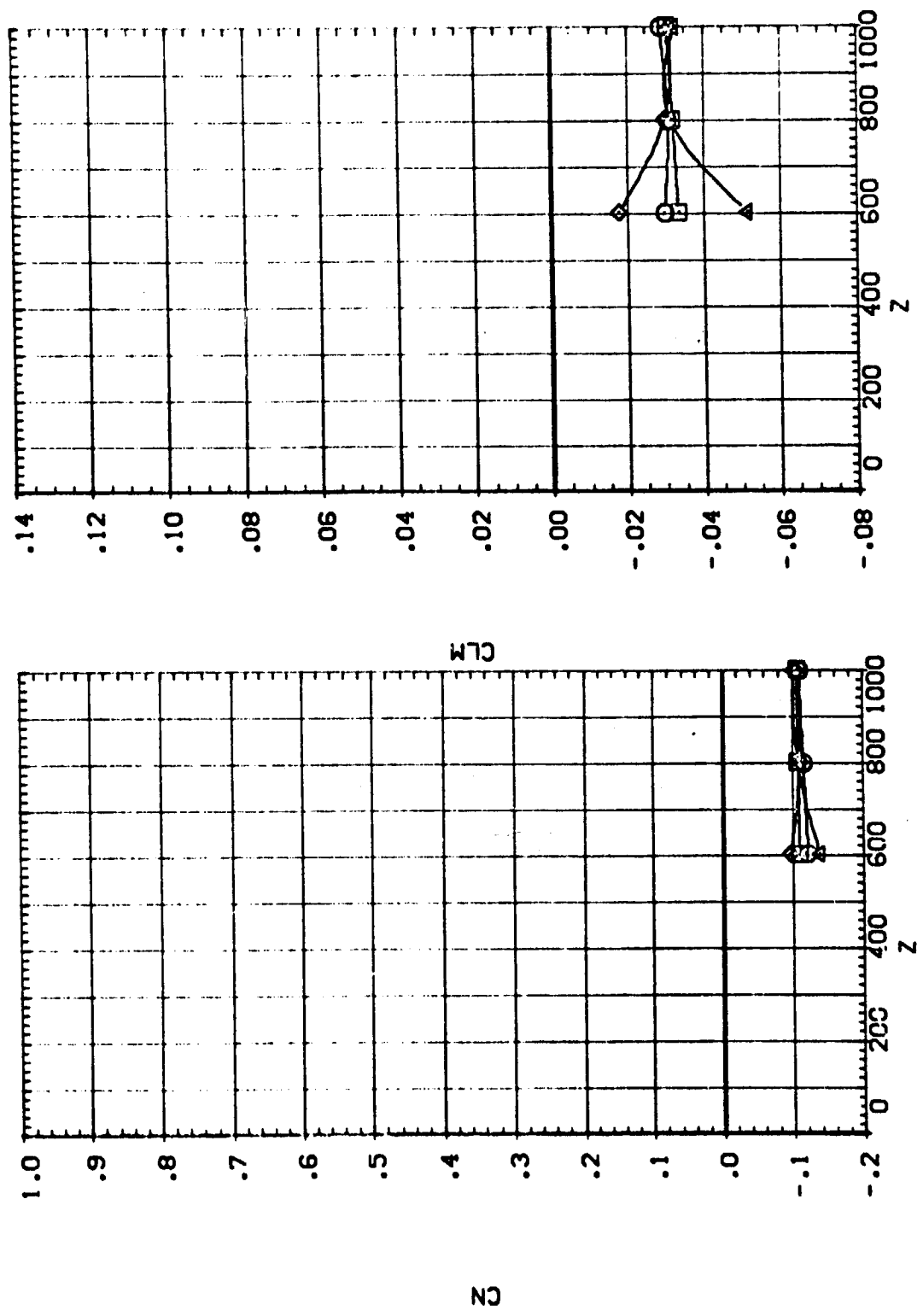


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ370)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

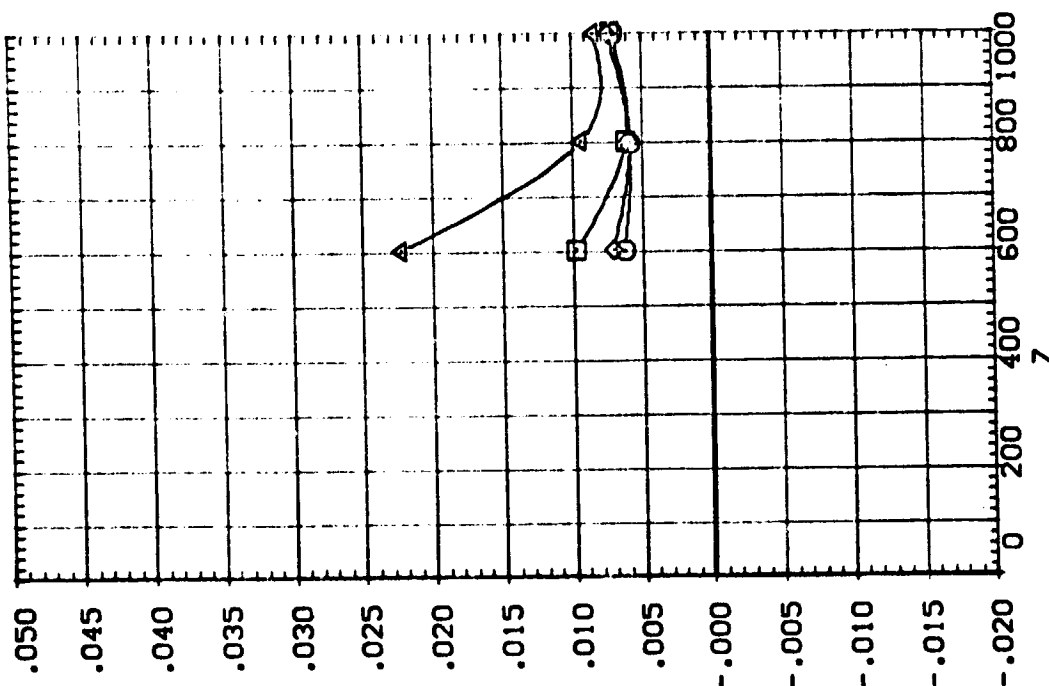
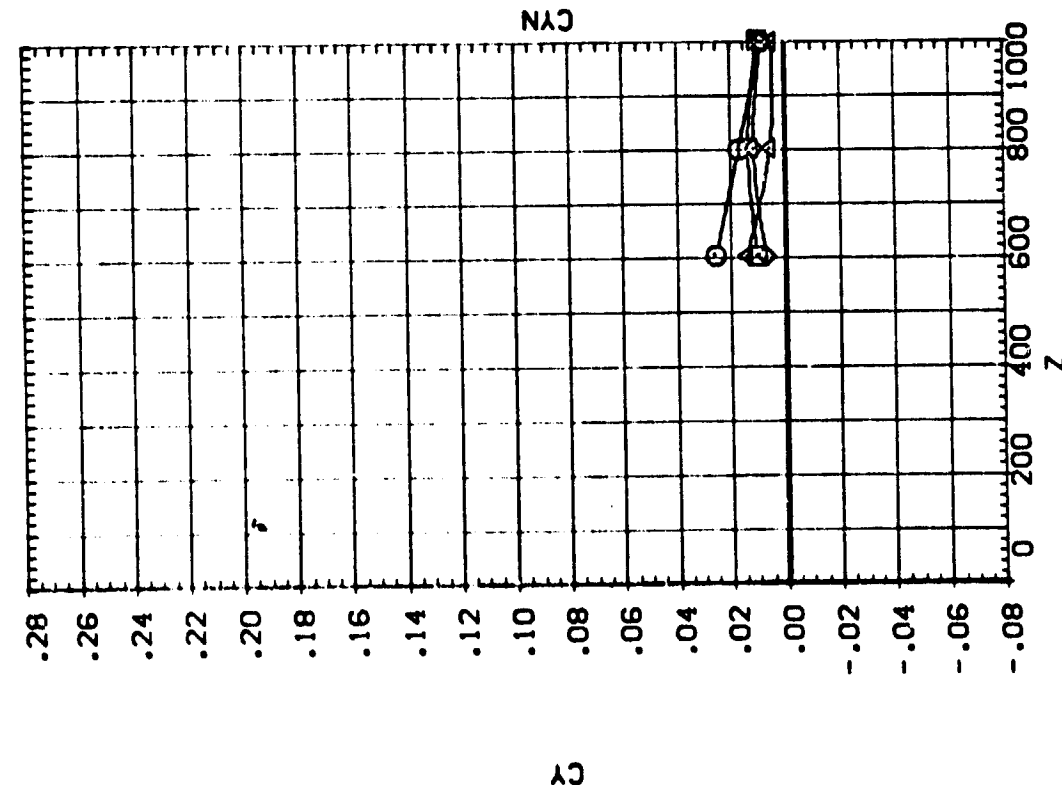
| SYMBOL | X | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | PTOTAL | 28.900 | |
| □ | 300.340 | ALPHA | .000 | BETA | .000 | |
| ◇ | 600.720 | DALPHA | -20.000 | DSETA | .000 | |
| △ | 900.430 | Y | 200.000 | PC*PR | 1500.000 | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ370)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | MACH | PARAMETRIC VALUES | 28.900 |
|--------|---------|--------|-------------------|--------|
| □ | 300.340 | ALPHA | 4.510 | PTOTAL |
| ◇ | 600.720 | DALPHA | .000 | BETA |
| △ | 900.430 | Y | -20.000 | DBETA |
| | | | 200.000 | PC-MBR |
| | | | 1500.000 | |

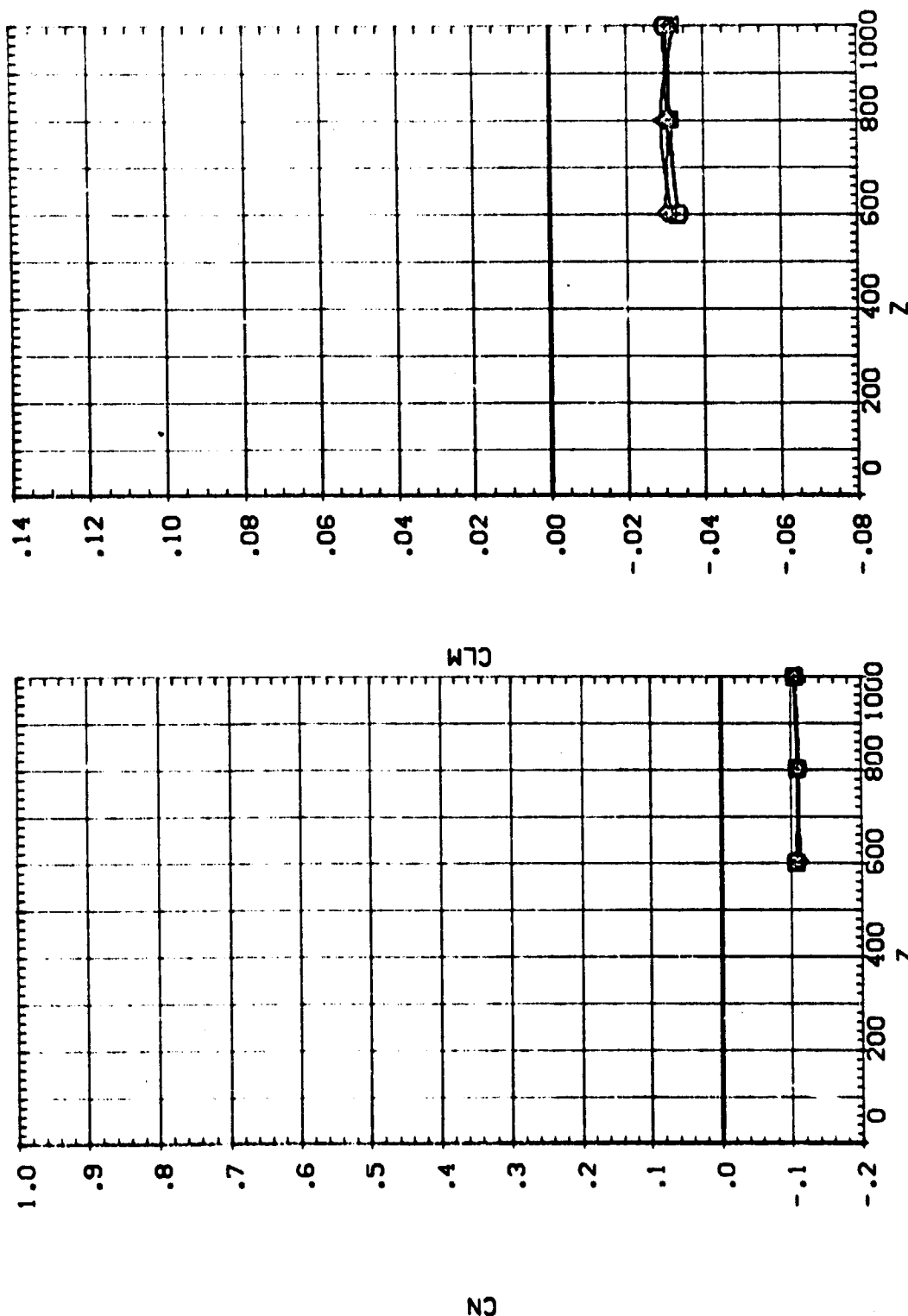


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ371)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | POTIAL | 28.900 |
| ○ | 300.350 | ALPHA | .000 | BETA | .000 |
| ◇ | 600.540 | DALPHA | -20.000 | DBETA | .000 |
| △ | 900.750 | Y | 400.000 | PC-HBR | 1500.000 |

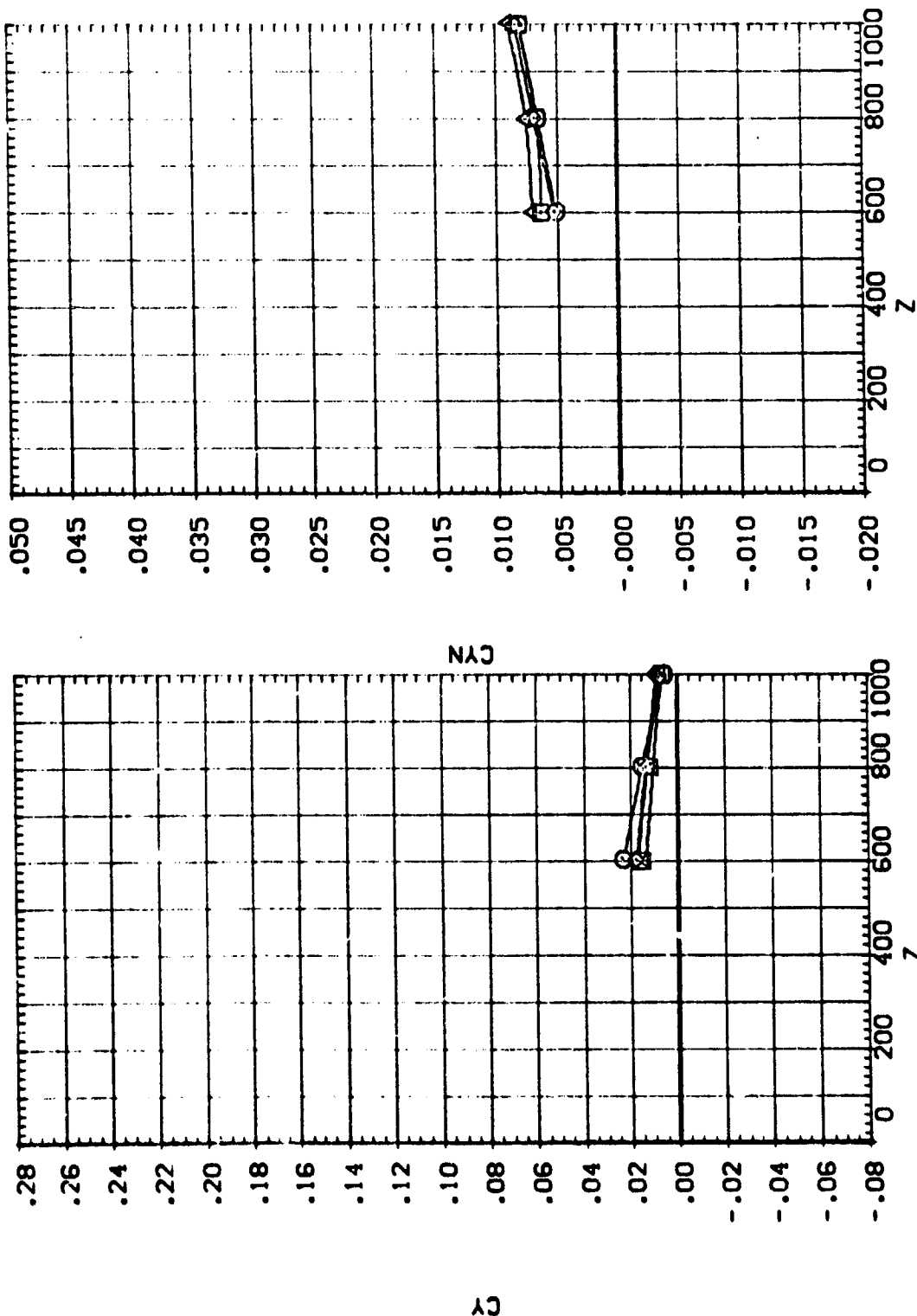


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ371)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL X MACH PARAMETRIC VALUES
 300.350 .202 4.510 PTOTAL 28.900
 600.540 .000 .000 BETA .000
 900.750 .000 .000 DBETA .000
 400.000 PC-MR 1500.000



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ372)

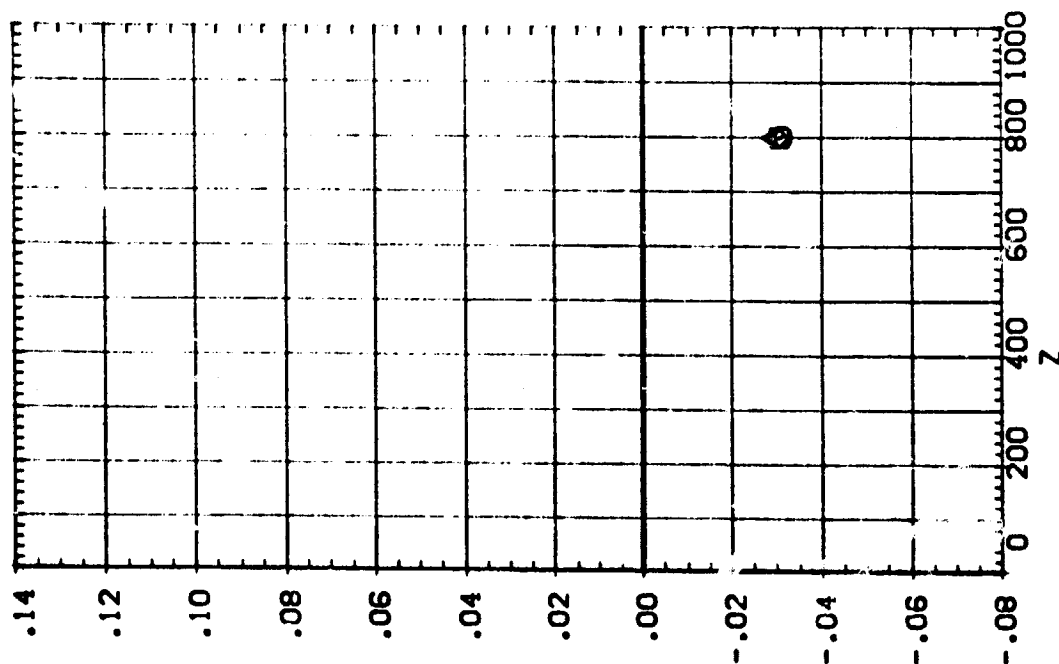
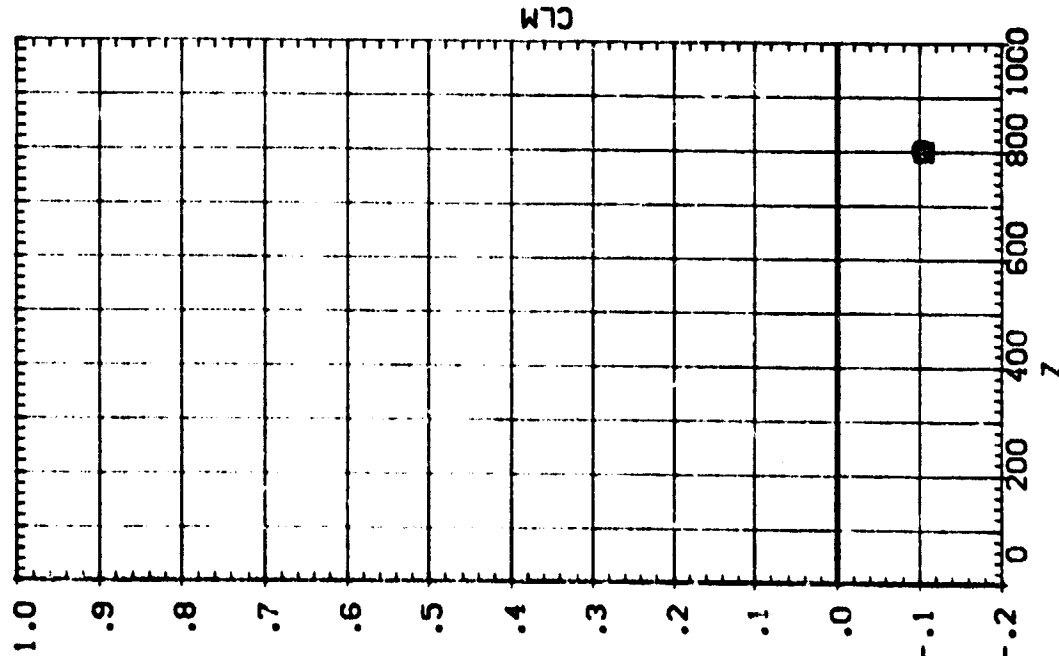
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| X | MACH | PTOTAL | 28.900 |
|---------|---------|--------|----------|
| -0.819 | 4.510 | BETA | .000 |
| 300.300 | .000 | DBETA | .000 |
| 600.510 | -20.000 | PC+PR | 1500.000 |
| 900.660 | 800.000 | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATA SETS

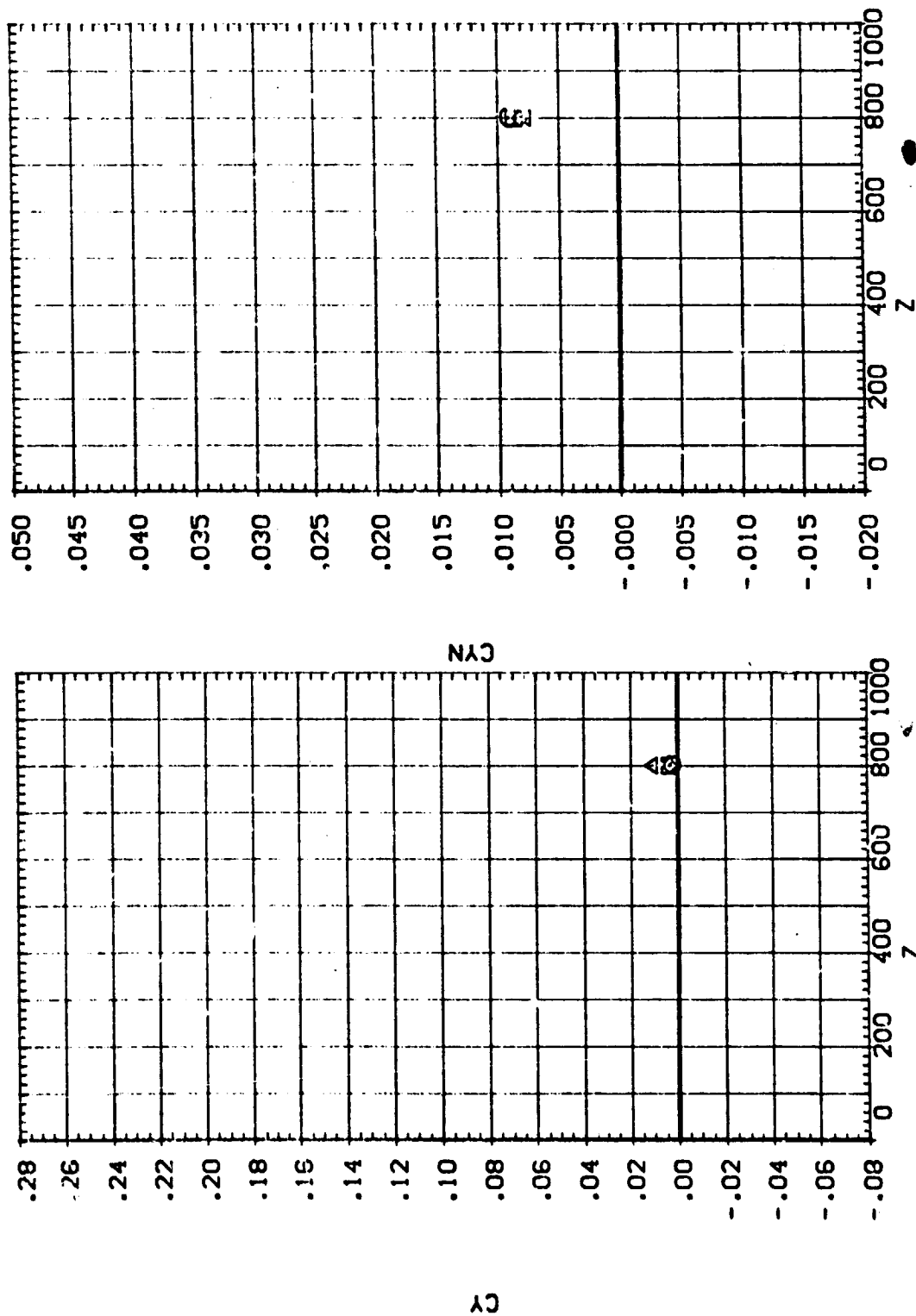


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RIJ372)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | X | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PICTEL | 28.500 |
| ○ | 300.300 | ALPHA | .000 | BETA | .000 |
| □ | 600.510 | DALPHA | -20.000 | DBETA | .000 |
| ◇ | 900.660 | Y | 800.000 | PC-MBR | 1500.000 |

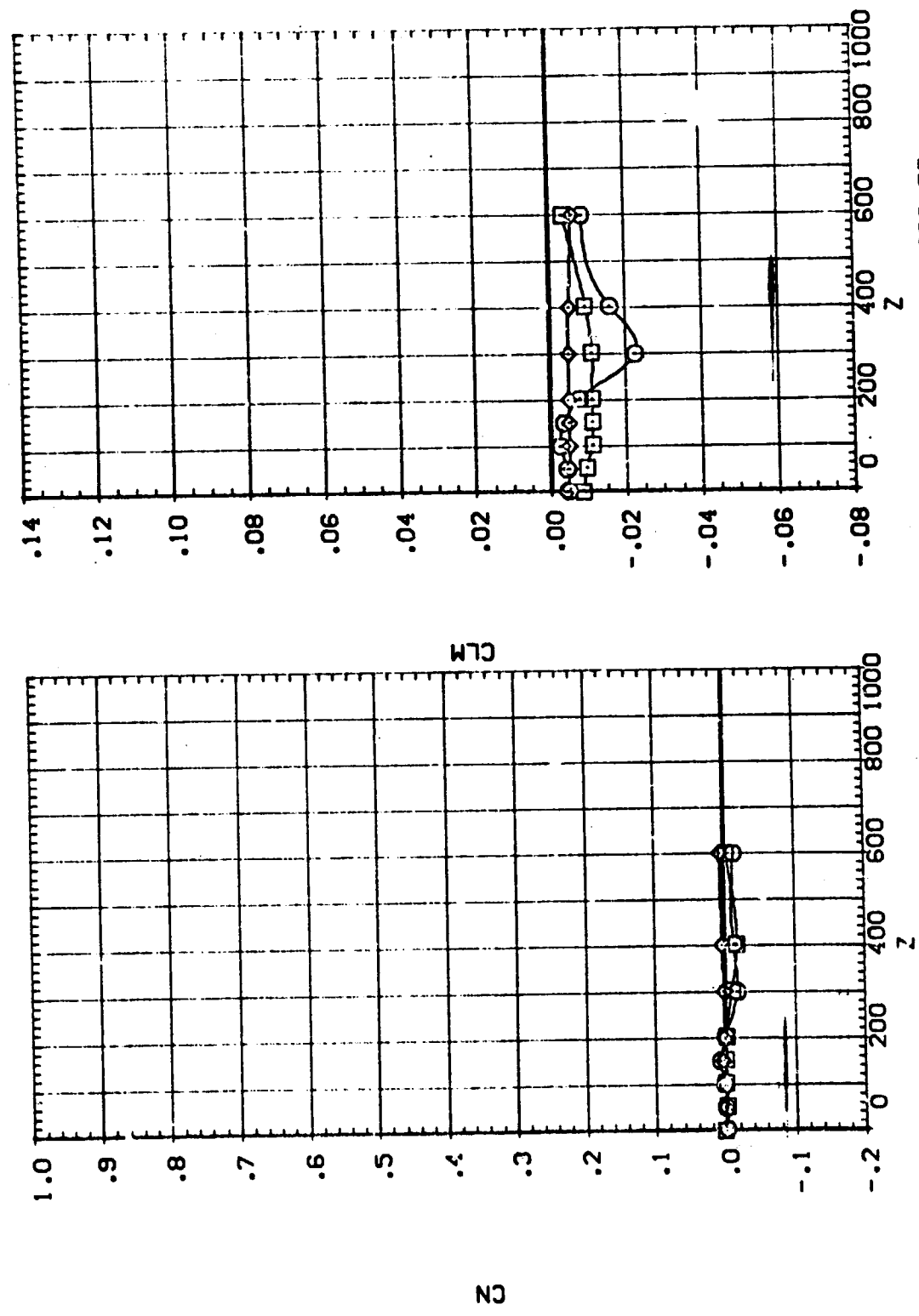


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ432)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

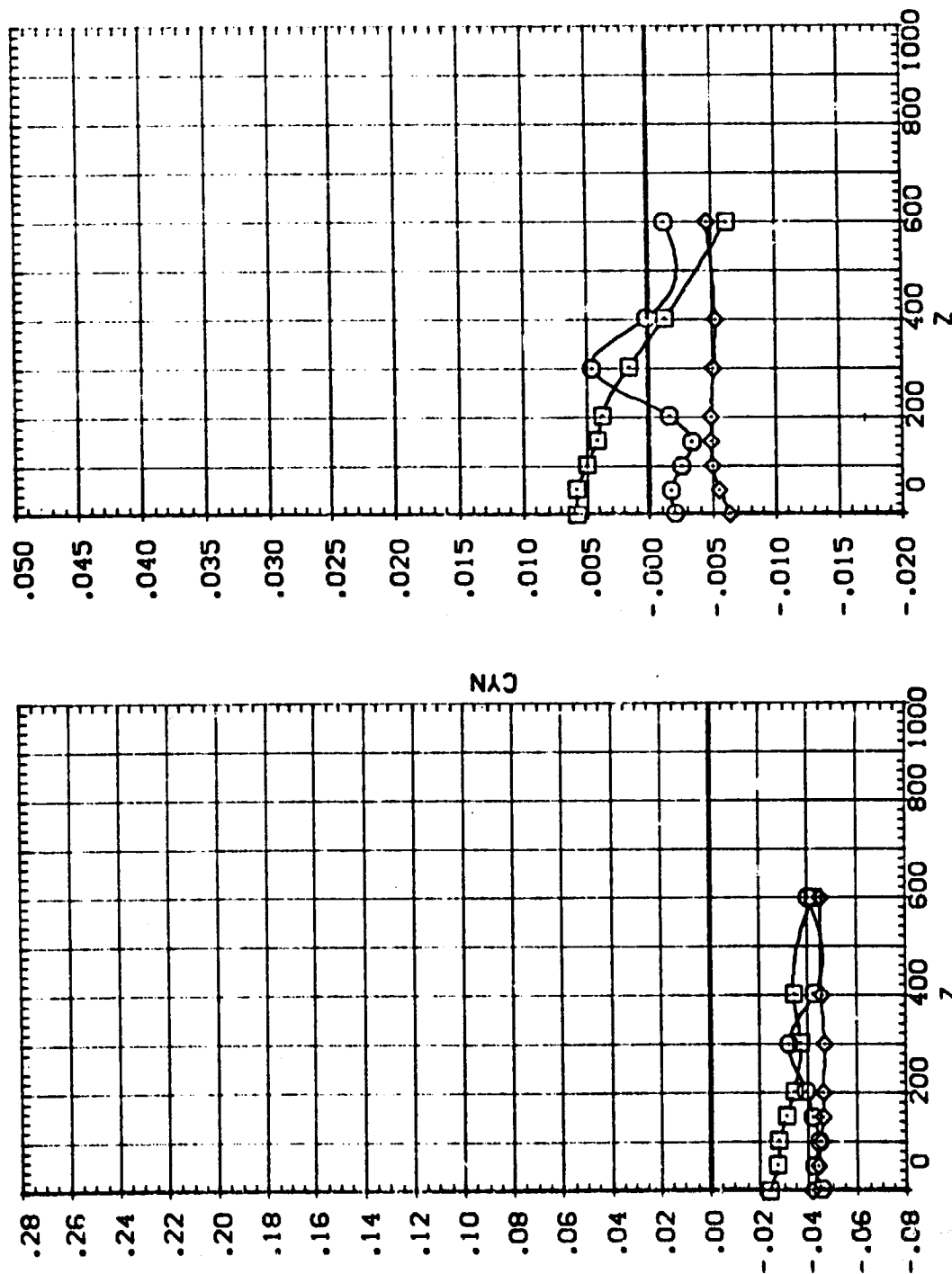
| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|-------|----------|
| | | MACH | 4.510 | PTOTL | 28.900 |
| ○ | 201.050 | ALPHA | .000 | BETA | 5.000 |
| ◇ | 400.180 | DALPHA | 5.000 | DBETA | 5.000 |
| | | | .000 | PC+8 | 1500.000 |



IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ432)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|------|----------|
| | | MACH | PTOTL | BETA | PCHEB |
| ○ | -0.212 | 4.510 | 28.900 | | |
| □ | 201.850 | .000 | 5.000 | | |
| ◇ | 400.180 | 5.000 | 5.000 | | |
| | | DALP=4 | | | |
| | | X | | | |
| | | | | | 1500.000 |

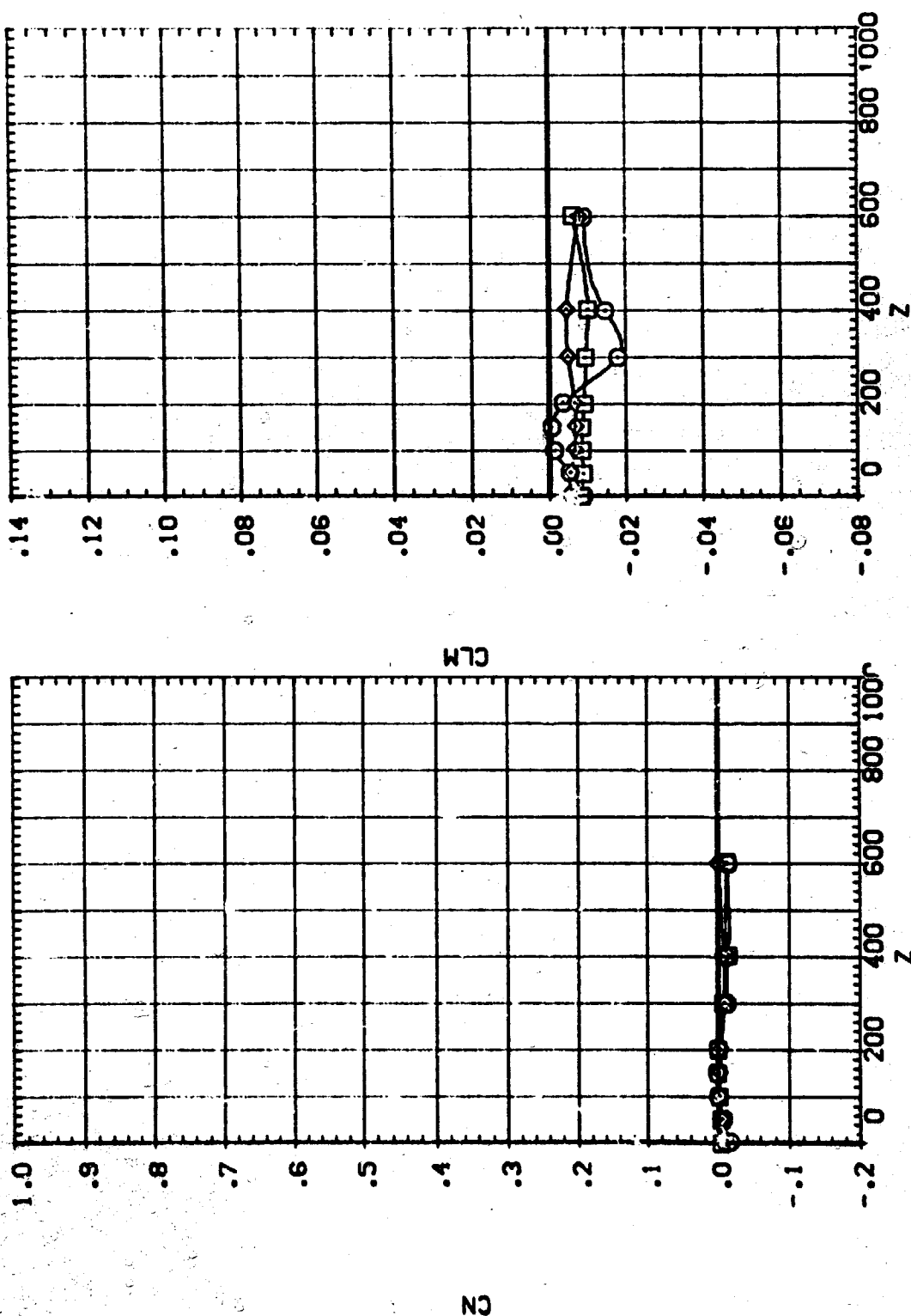


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ433)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYM | Y | PARAMETRIC VALUES | | | |
|-----|---------|-------------------|-------|-------|----------|
| | | MACH | PTOTL | BETA | DBETA |
| ○ | 199.680 | .415 | 4.510 | .000 | .000 |
| □ | 402.680 | ALPHA | 5.000 | DBETA | 1500.000 |
| ◇ | X | PC+8 | .000 | | |

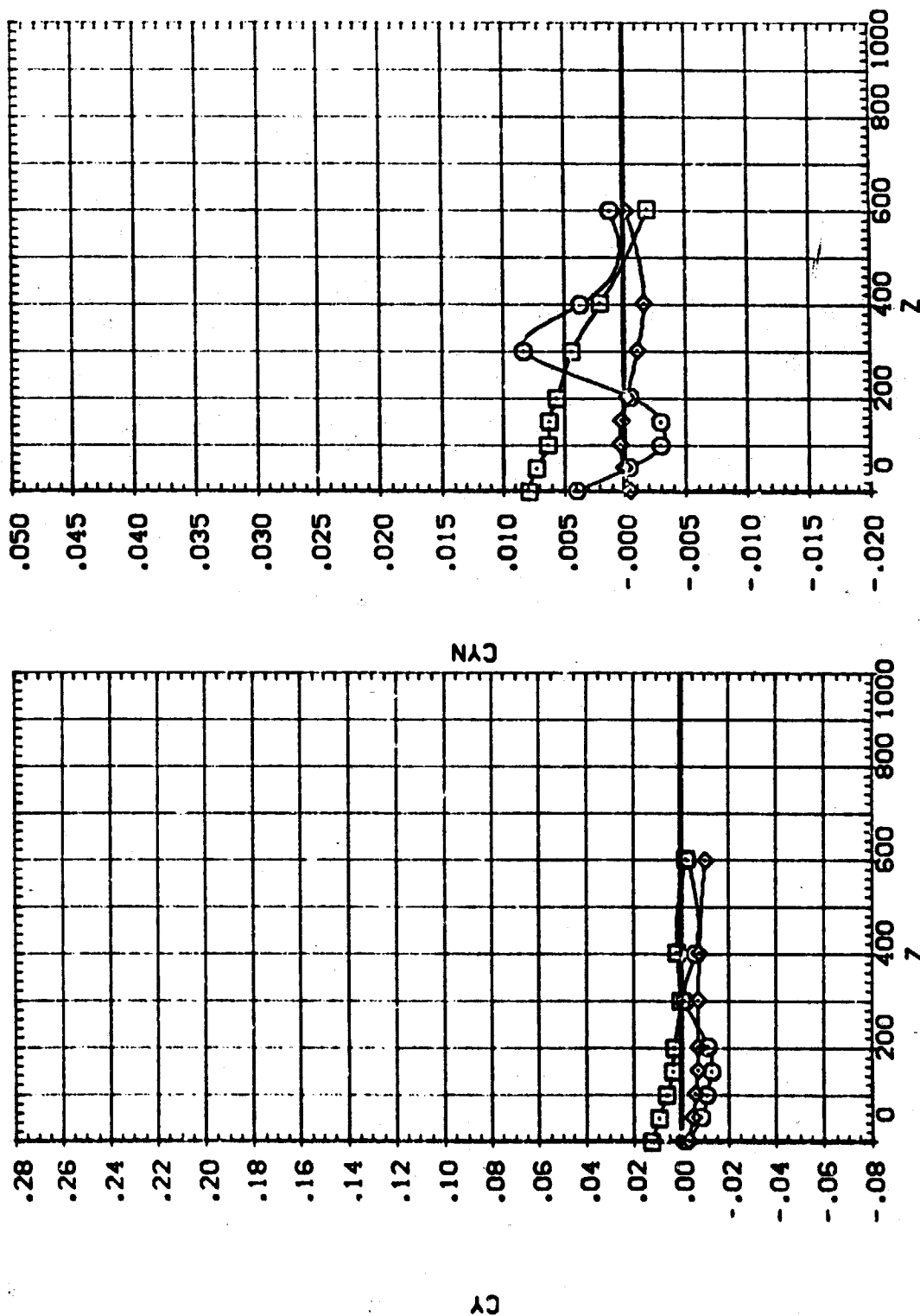


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ433)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | | |
|--------|---------|-------------------|-------|-------|----------|-------|-------|
| | | MACH | 4.510 | PIOTL | 28.900 | BETA | 5.000 |
| ○ | 199.690 | ALPHA | .000 | BETA | .000 | DBETA | .000 |
| □ | 402.690 | DALPHA | .000 | PC+8 | 1500.000 | | |
| ◇ | | X | | | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

!A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ434)

SYMBOL

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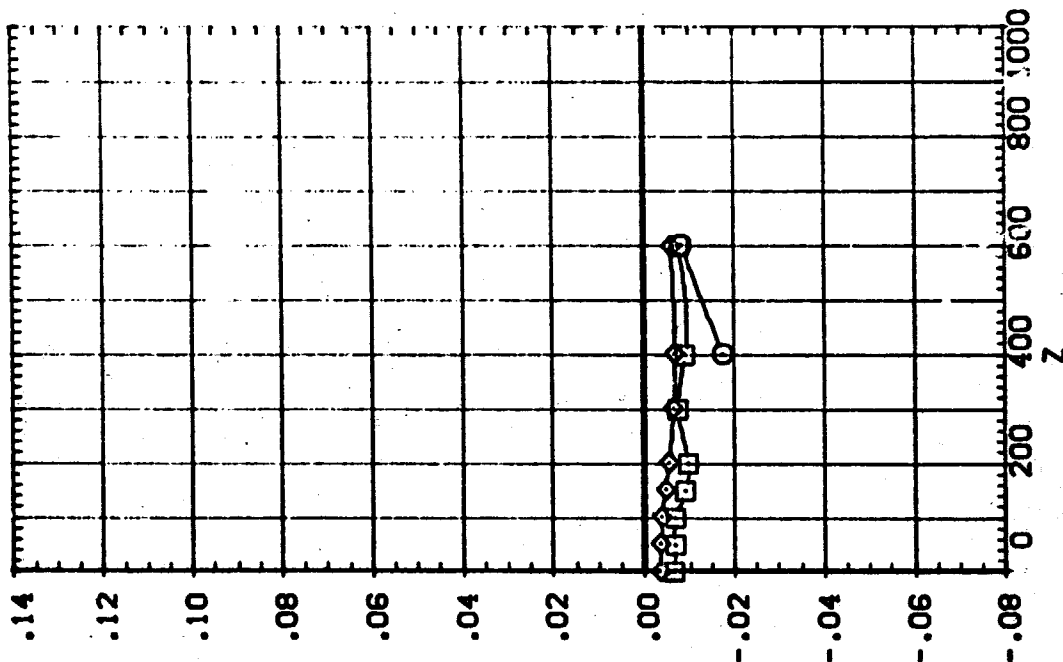
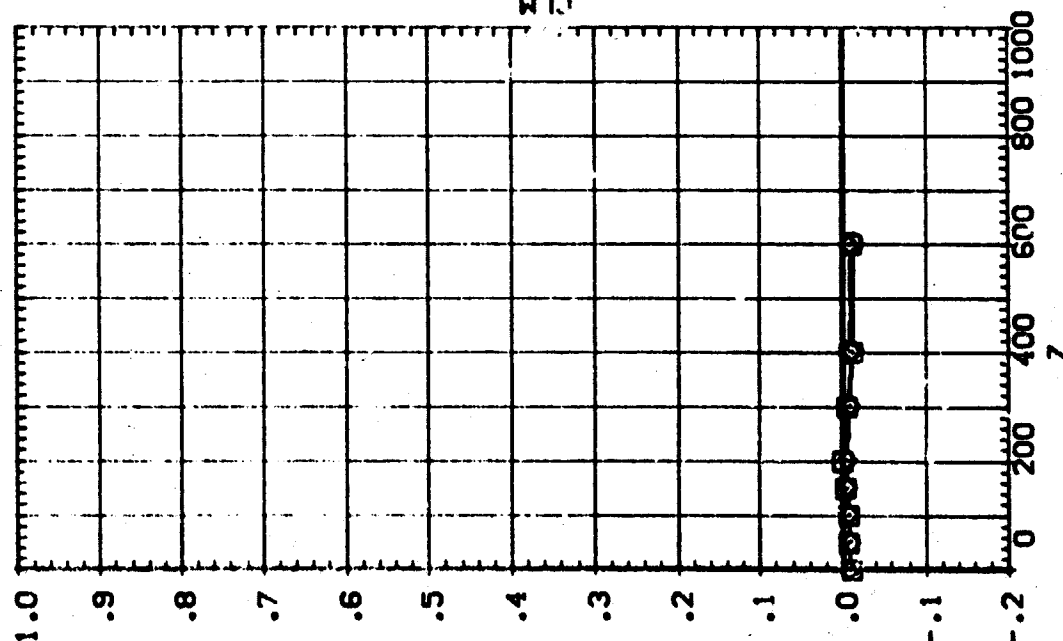
.37:
:98.450
398.620

MACH
ALPHA
DALPHA
X

PARAMETRIC VALUES

4.510 PTOTL 28.800
.000 BETA 5.000
5.000 DBETA -5.000
.000 PO+8 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ434)

SYMBOL

Y

□

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PARAMETRIC VALUES

| MACH | PTOTL | 28.900 |
|-------|-------|----------|
| 4.510 | BETA | 5.000 |
| .000 | DBETA | -5.000 |
| 5.000 | PC-H8 | 1500.000 |
| .000 | | |

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IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ435)

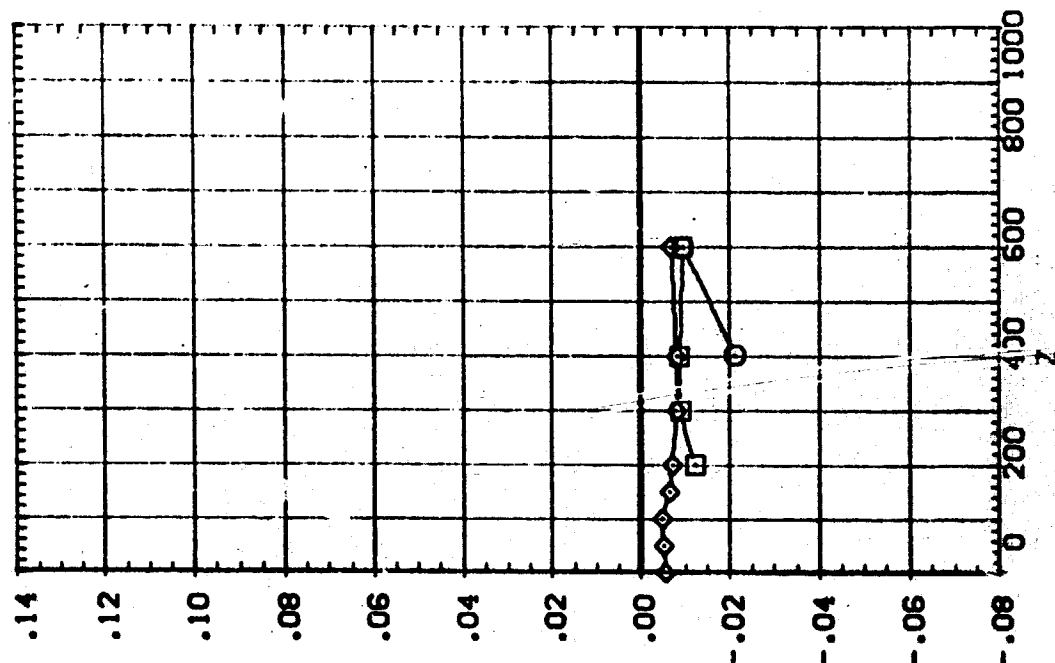
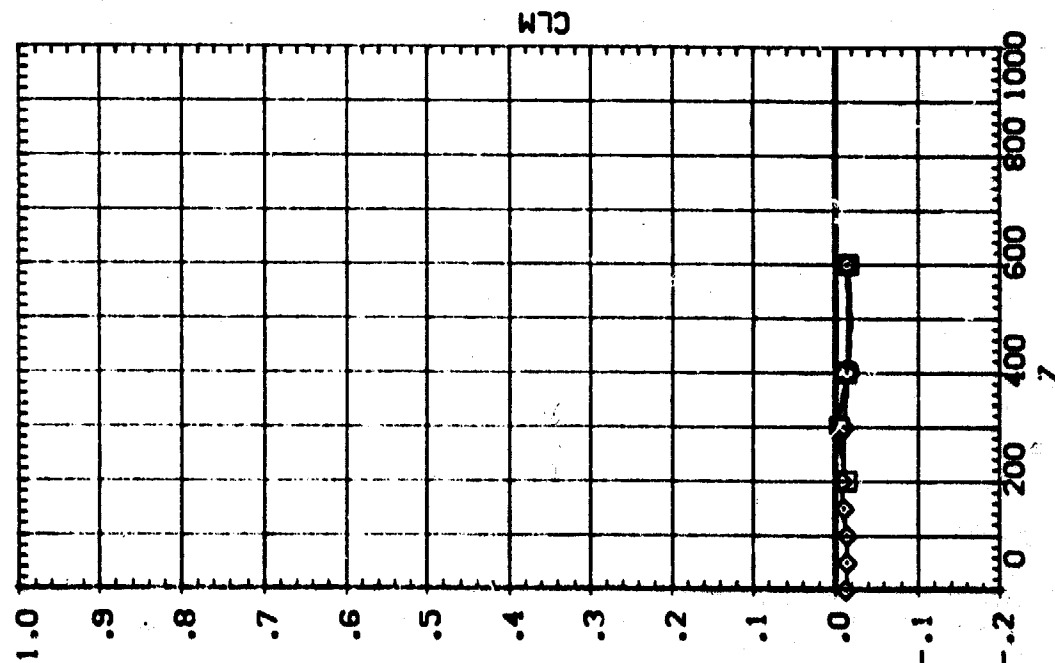
SYMBOL

○
□
◇

PARAMETRIC VALUES

| | | | | |
|---------|--------|-------|-------|----------|
| 2.246 | MACH | 4.510 | PTOTL | 28.900 |
| 201.330 | ALPHA | .000 | BETA | 5.000 |
| 399.940 | DALPHA | 5.000 | DBETA | -10.000 |
| | X | .000 | PC-HB | 1500.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (R7J435)

SYMBOL

Y

2.246

MACH

PARAMETRIC VALUES

4.510

PTOTL

28.900

201.330

ALPHA

.000

BETA

5.000

399.940

DALPHA

.000

PCPB

1500.000

X

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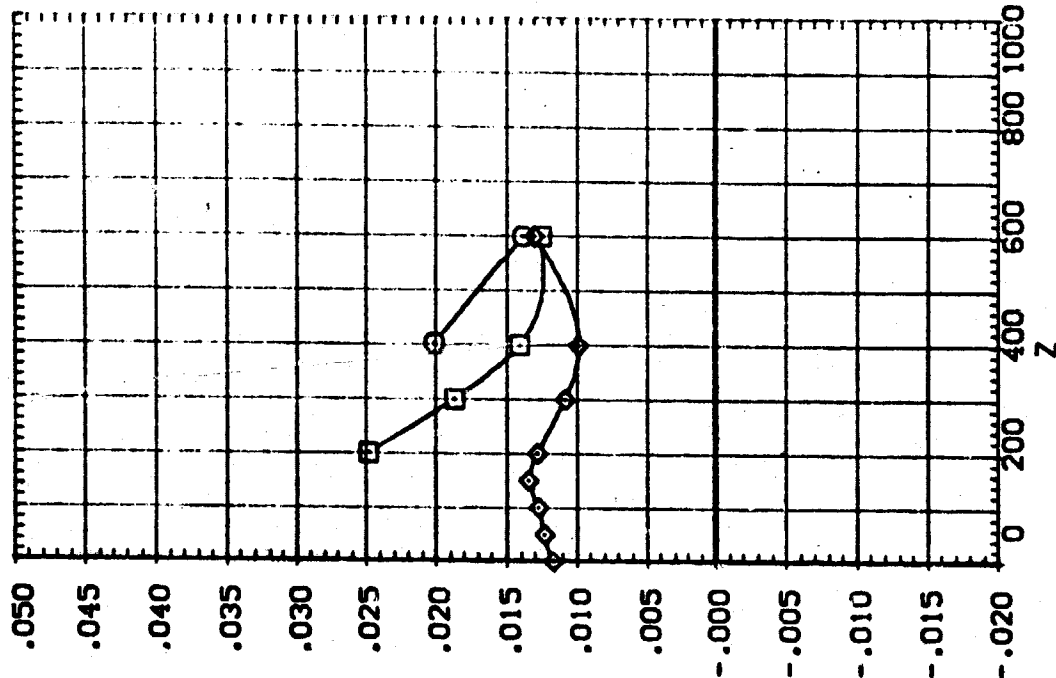
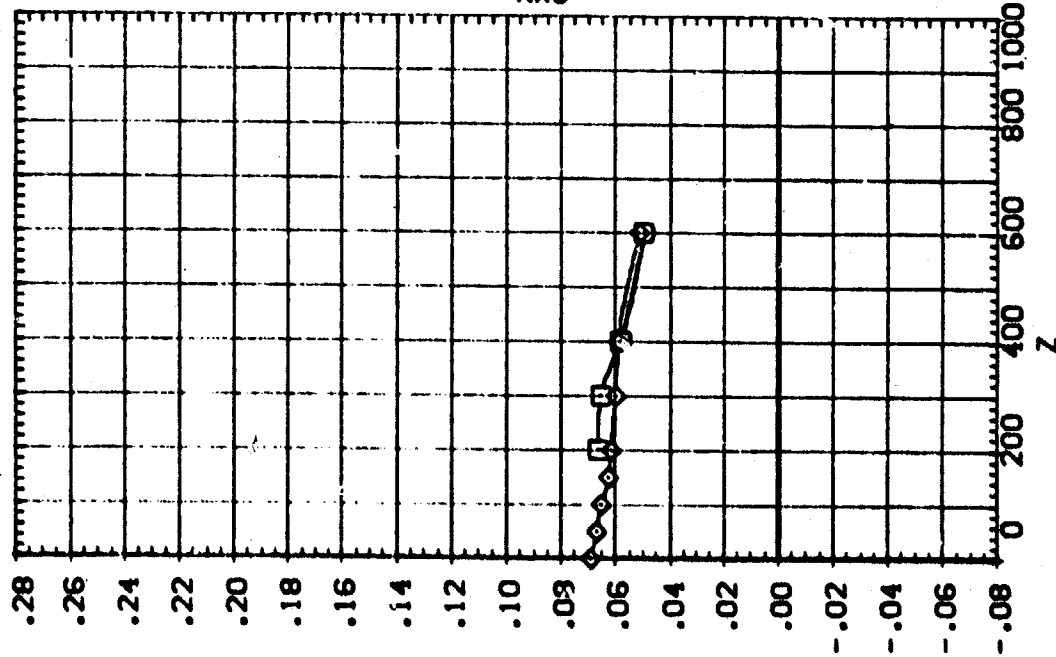
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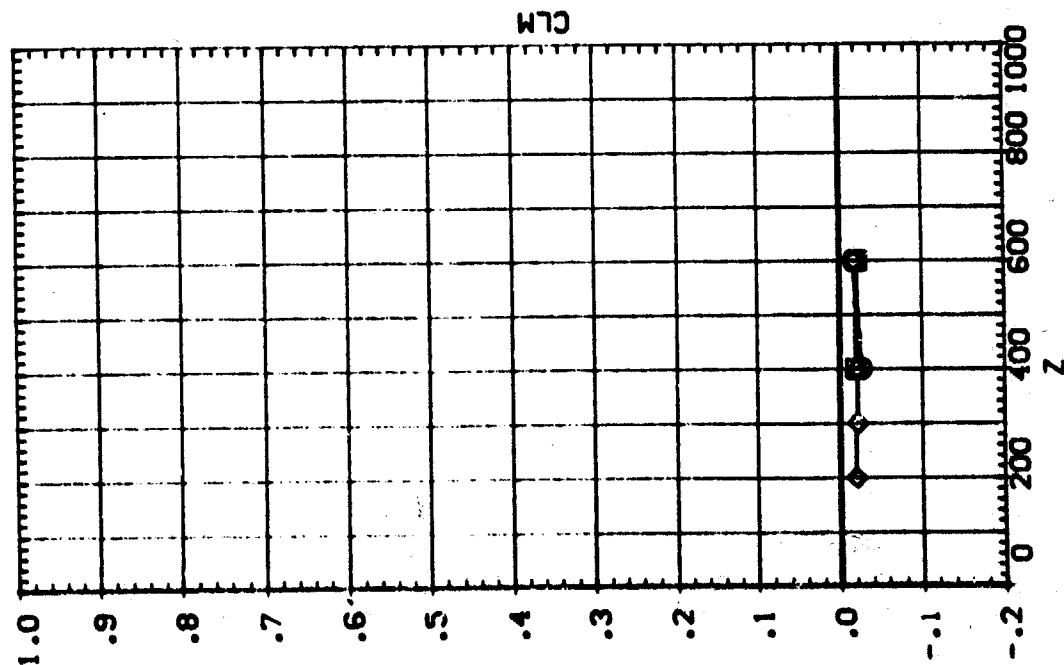
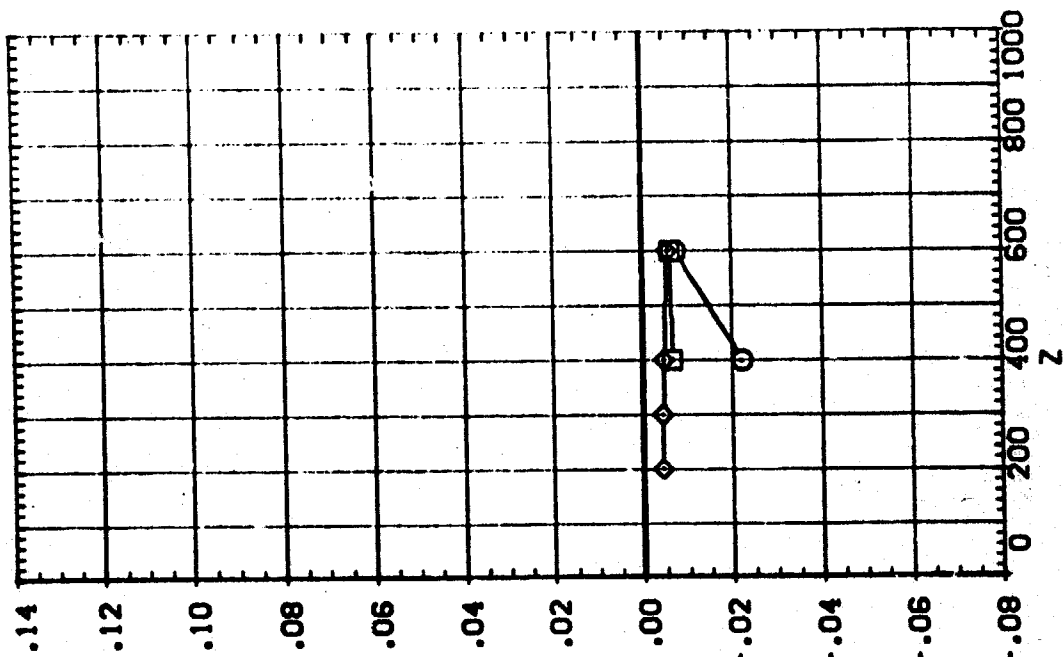


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ436)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|-------|--------|----------|
| | | MACH | 4.510 | PITOTL | 28.500 |
| ○ | 200.280 | ALPHA | .000 | BETA | 5.000 |
| □ | 400.820 | ALPHA | 5.000 | DBETA | -20.000 |
| ◇ | | X | .000 | PC+P8 | 1500.000 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

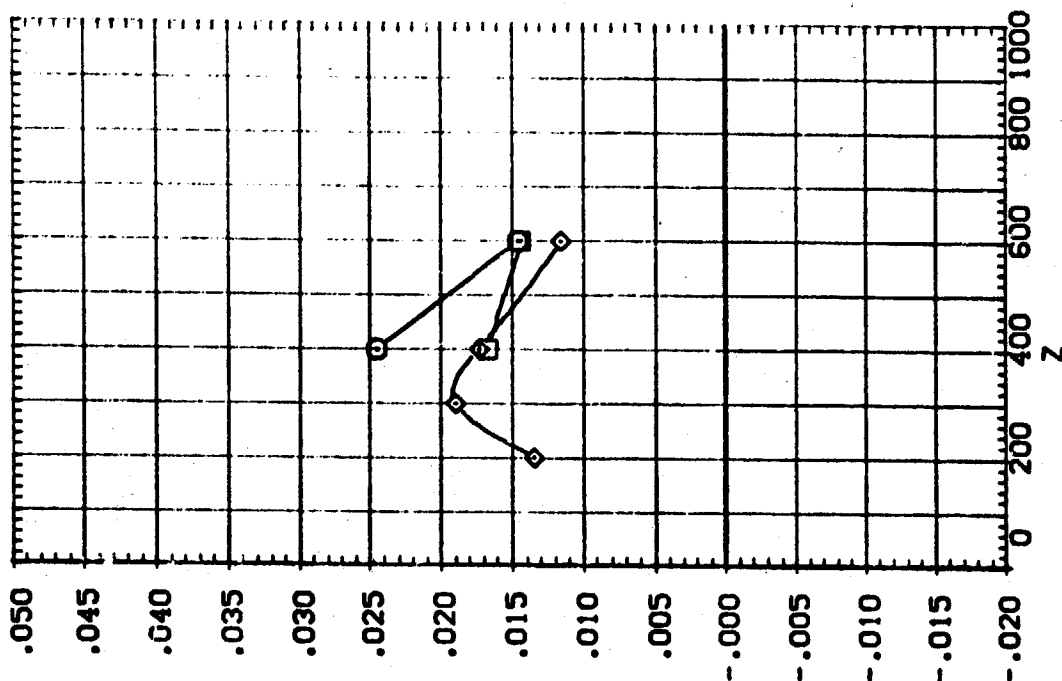
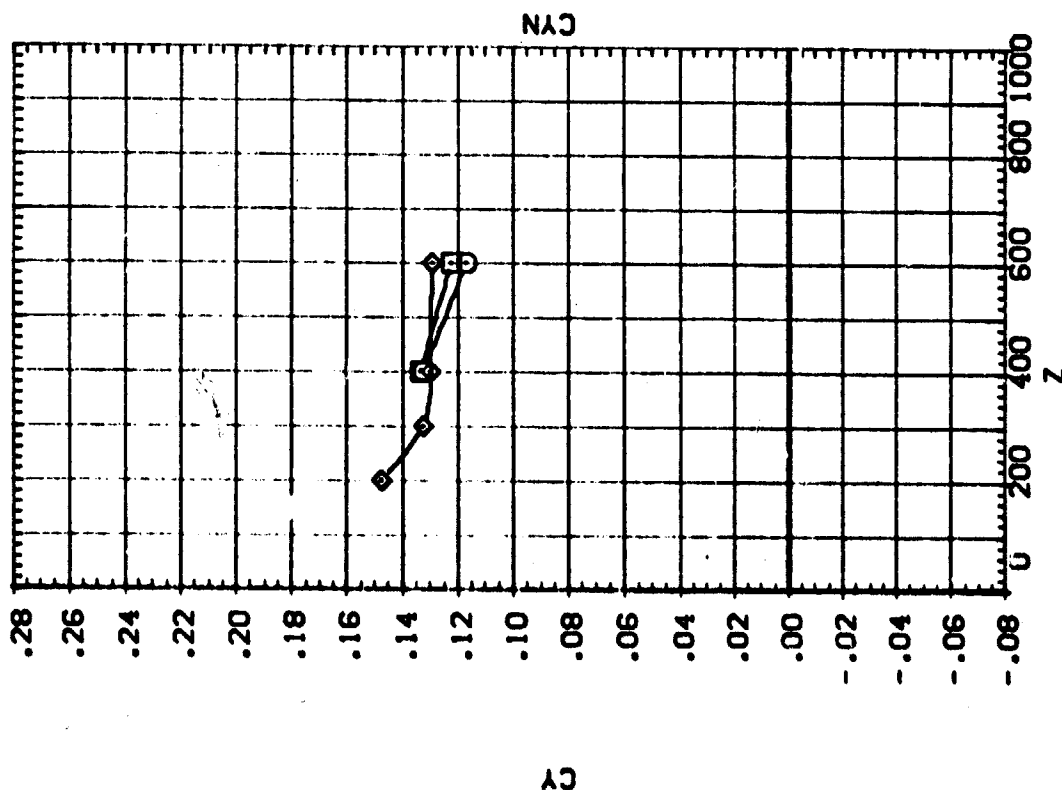
SYMBOL

Y

PARAMETRIC VALUES

MACH 4.510 PTOTL 28.900
 ALPHA .000 BETA 5.000
 PC-HB 5.000 DBETA -20.000
 X 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RIJ437)

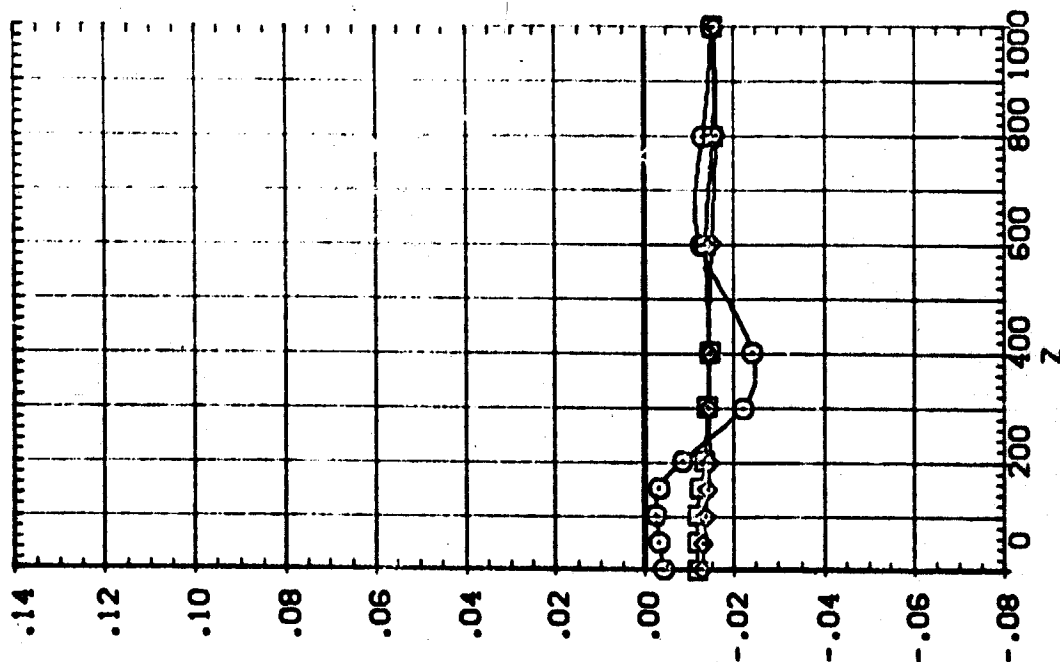
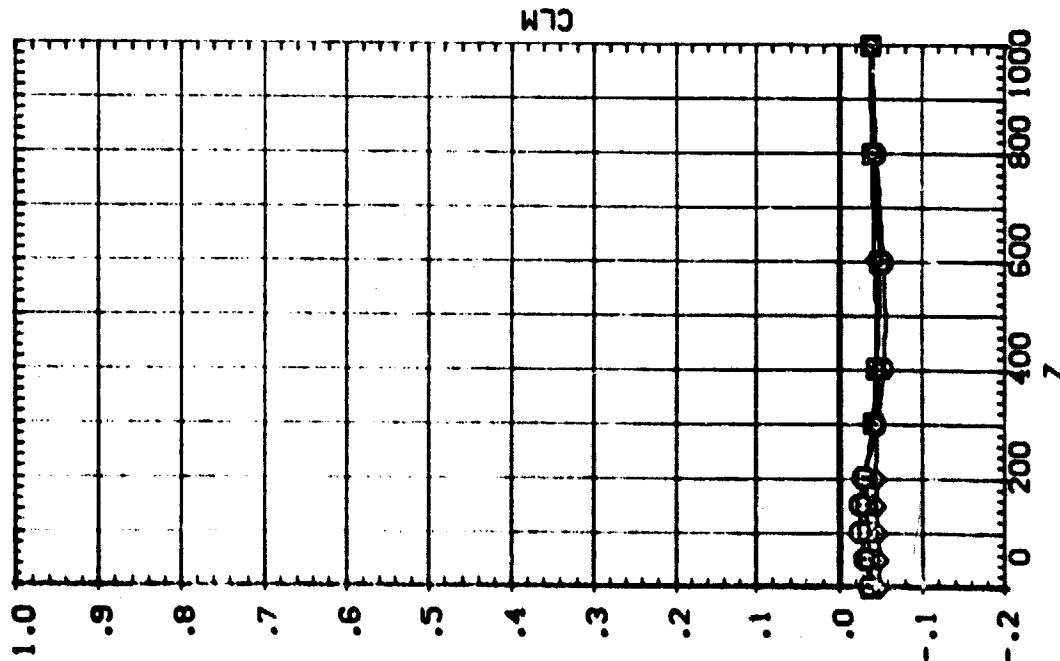
SYMBOL

○ □ ◇

PARAMETRIC VALUES

| | MACH | P10TL | 28.800 |
|---------|------|-------|----------|
| 202.130 | .273 | .000 | BETA |
| 388.400 | .000 | .000 | DBETA |
| | .000 | PC+8 | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ437)

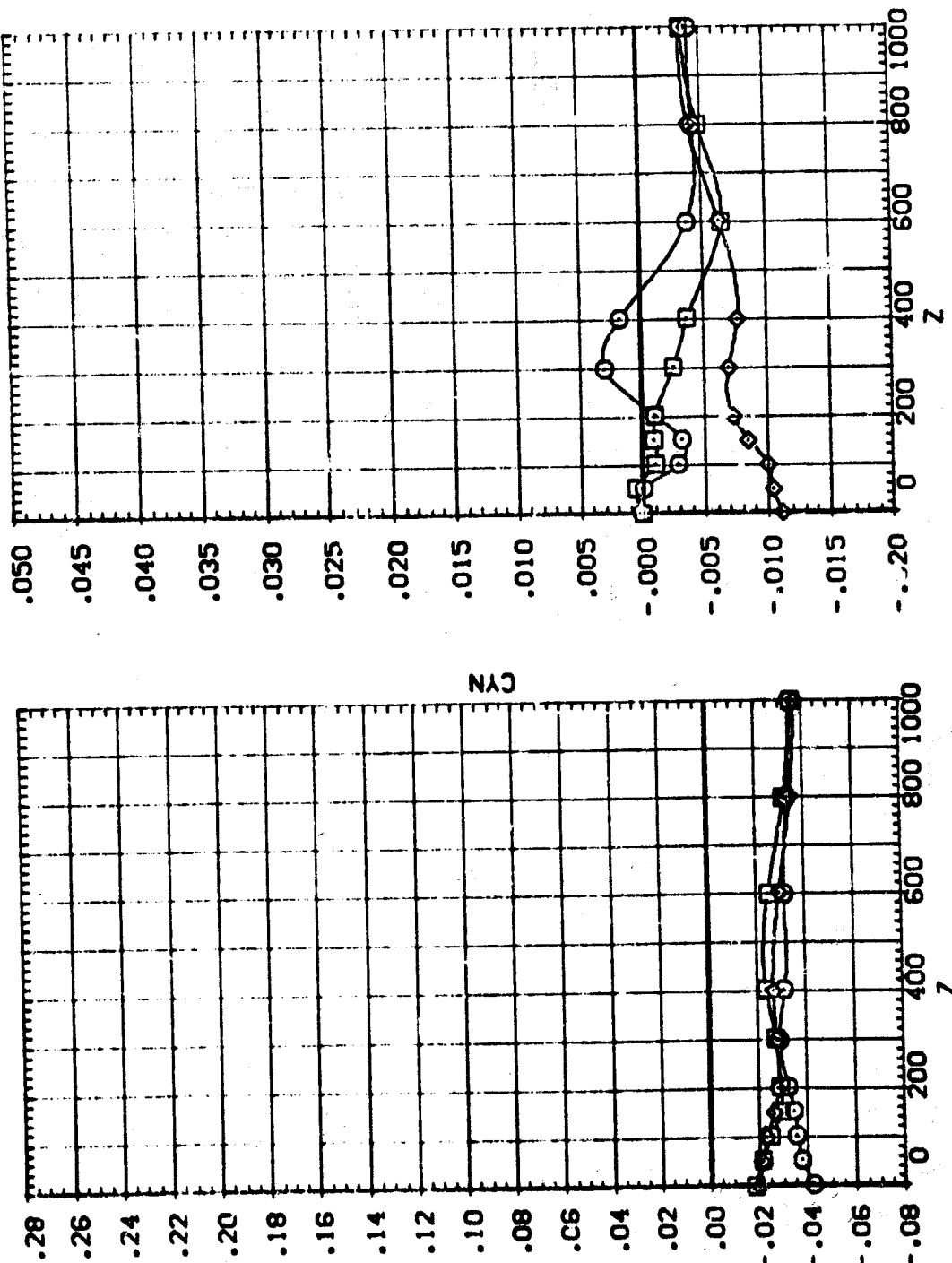
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL

○ □ ◇

PARAMETRIC VALUES

| Y | .273 | MACH | 4.510 | PTOTL | 28.900 |
|---------|--------|------|-------|----------|--------|
| 202.130 | ALPHA | .000 | BETA | 5.000 | |
| 359.400 | DALPHA | .000 | DBETA | 5.000 | |
| X | | | PC-HB | 1500.000 | |



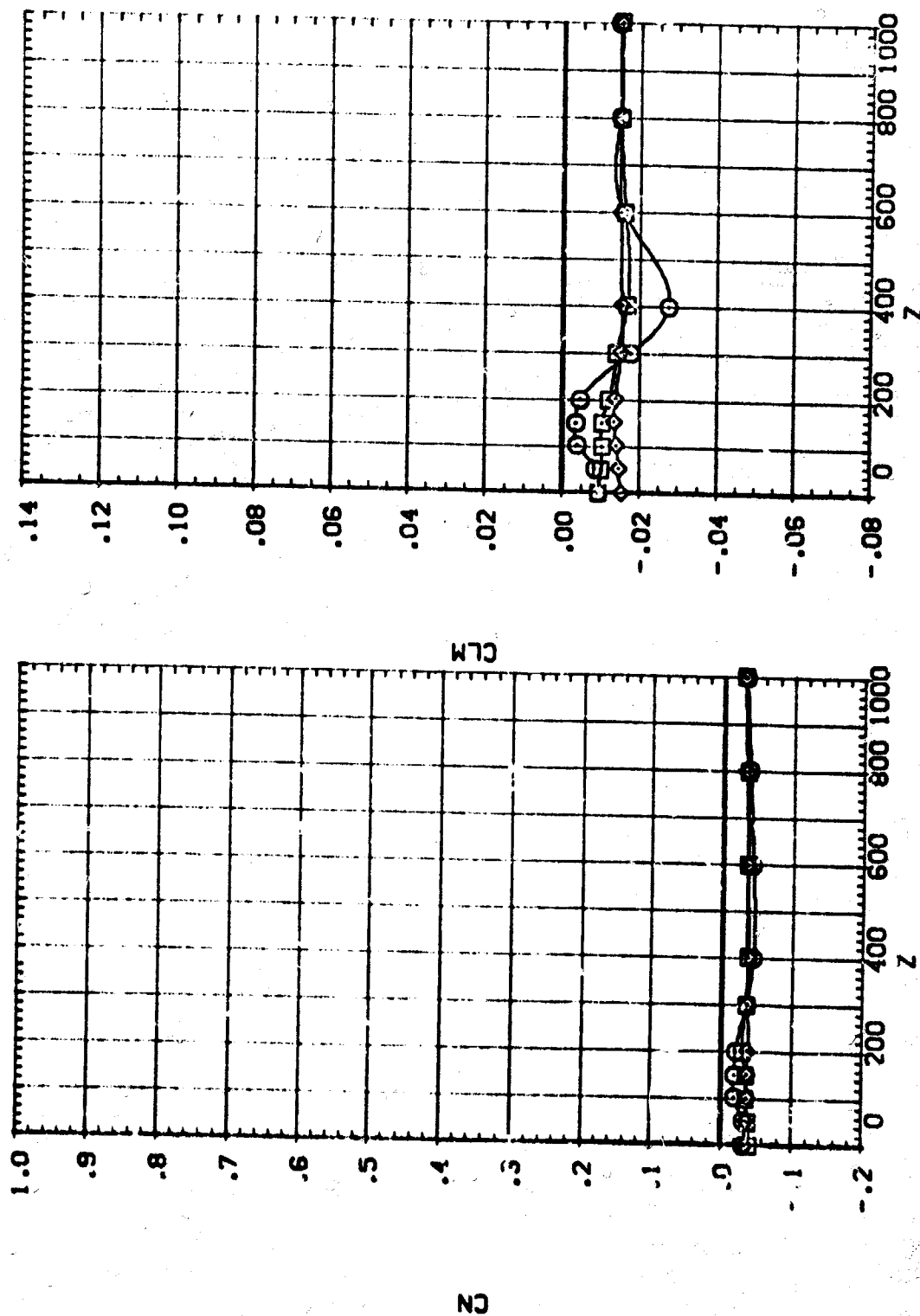
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09110 (RTJ438)

SYMBOL:
 ○ □ ◇ △

PARAMETRIC VALUES
 .318 MACH 4.510 PTOIL 20.900
 198.800 ALPHA .000 BETA 5.000
 402.430 DALPHA .000 DBETA .000
 870.200 X 700 PC-M8 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

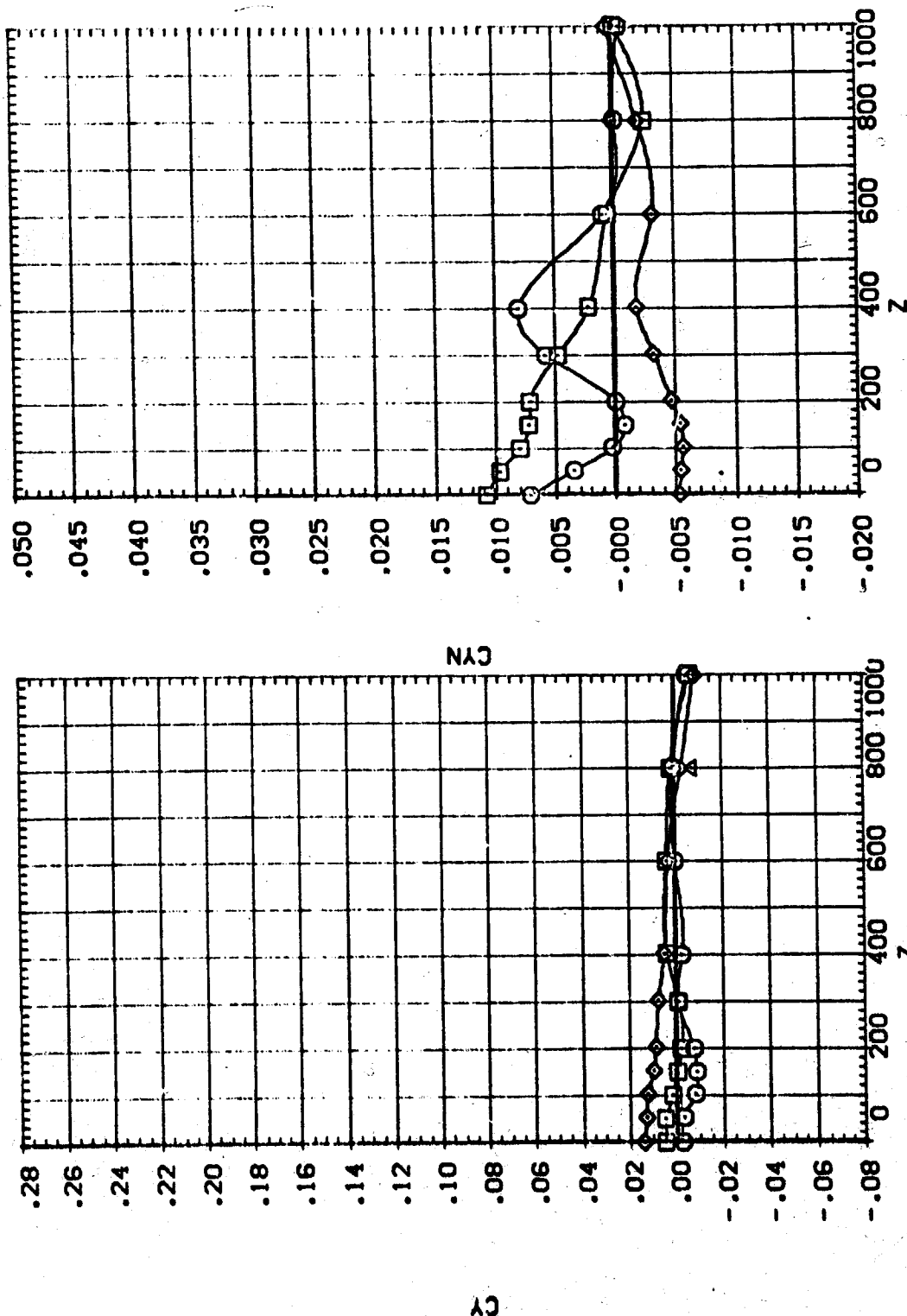


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL: \square \diamond \triangle

| PARAMETRIC VALUES | | | |
|-------------------|--------|-------|----------|
| Y | MACH | PTOTL | 28.900 |
| 198.800 | ALPHA | BETA | 5.000 |
| 402.490 | DALPHA | DBETA | .000 |
| 800.280 | X | PC+PB | 1500.000 |

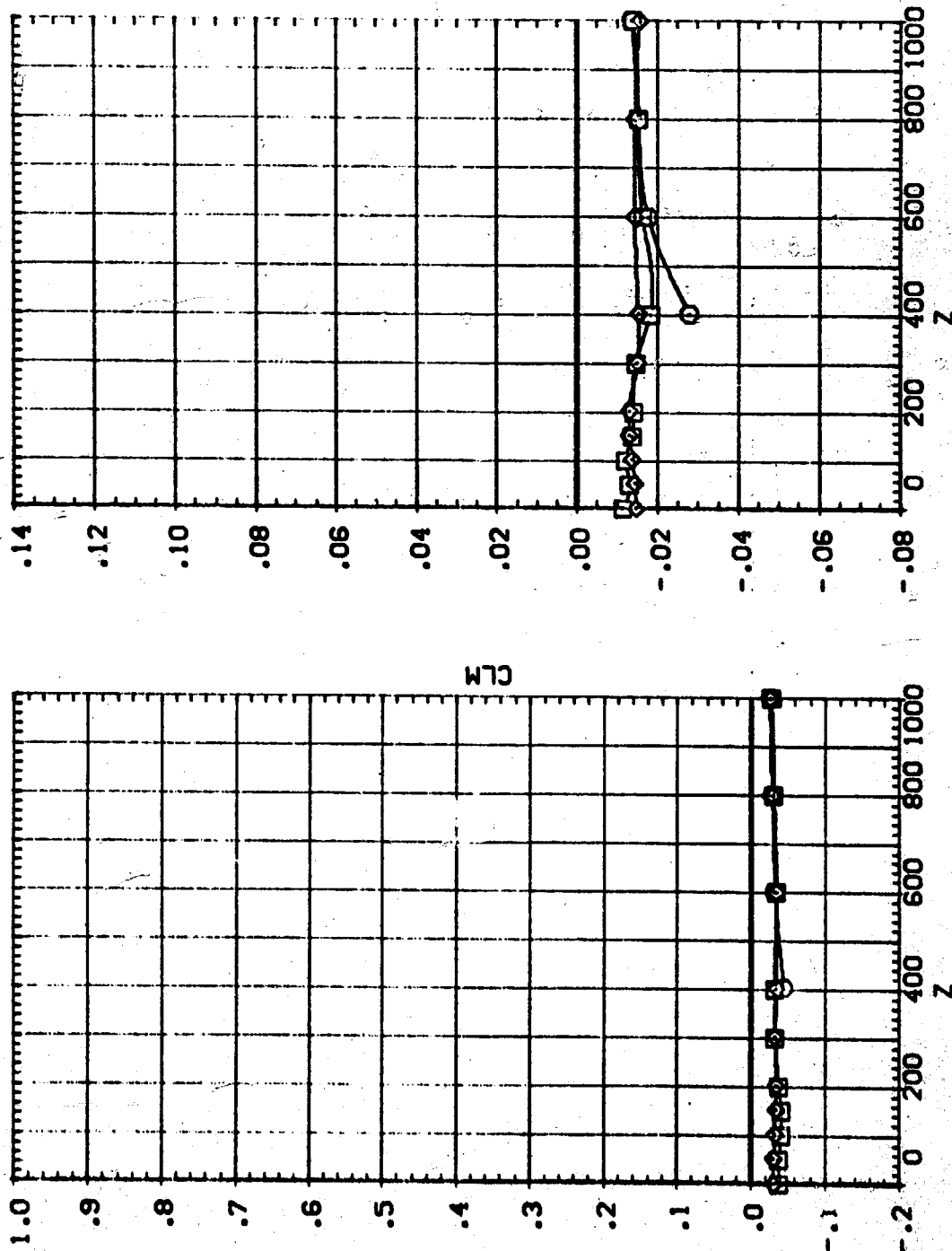


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ439)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

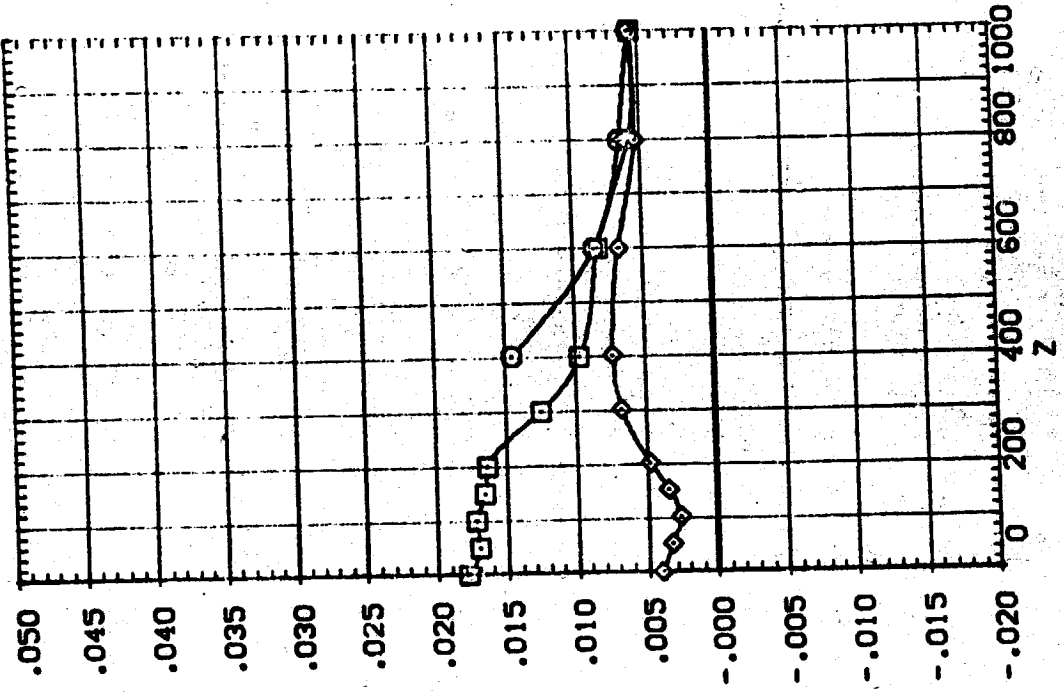
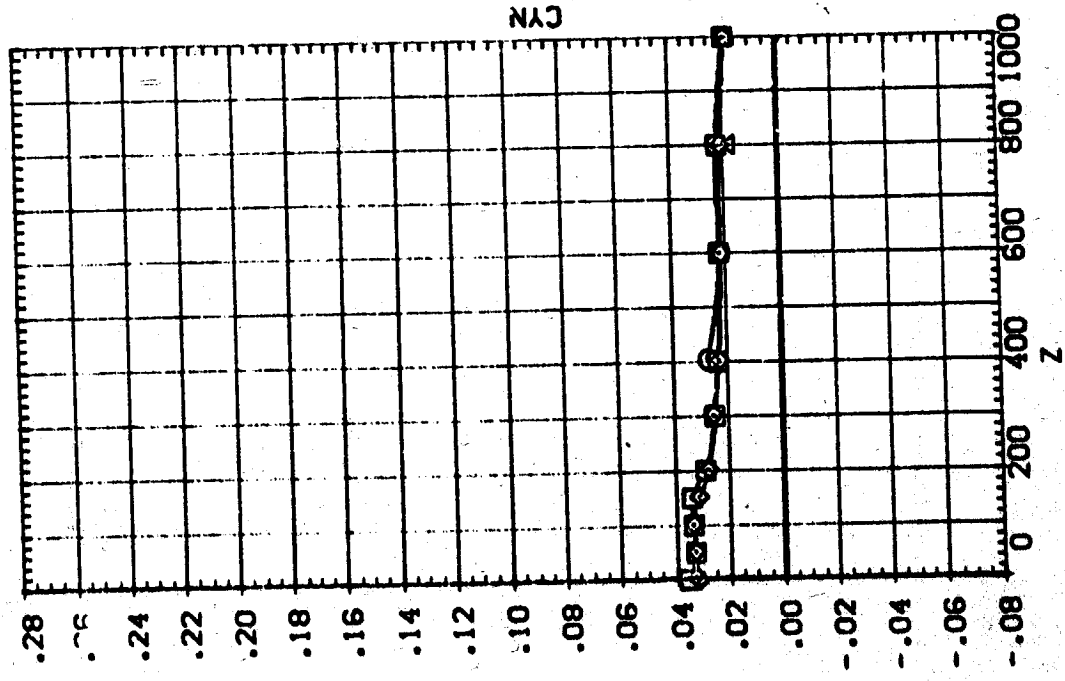
| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 198.470 | ALPHA | .000 | BETA | 5.000 | |
| □ | 400.250 | DALPHA | .000 | DBETA | -5.000 | |
| ◇ | 799.800 | X | .000 | POW8 | 1500.000 | |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | WCH |
| 198.470 | ALPHA |
| 400.250 | DALPHA |
| 799.800 | X |
| PARAMETRIC VALUES | |
| PTOTL | 28.900 |
| BETA | 5.000 |
| DBETA | -5.000 |
| PCPB | 1500.000 |

SYMBOL
○
□
◇
△

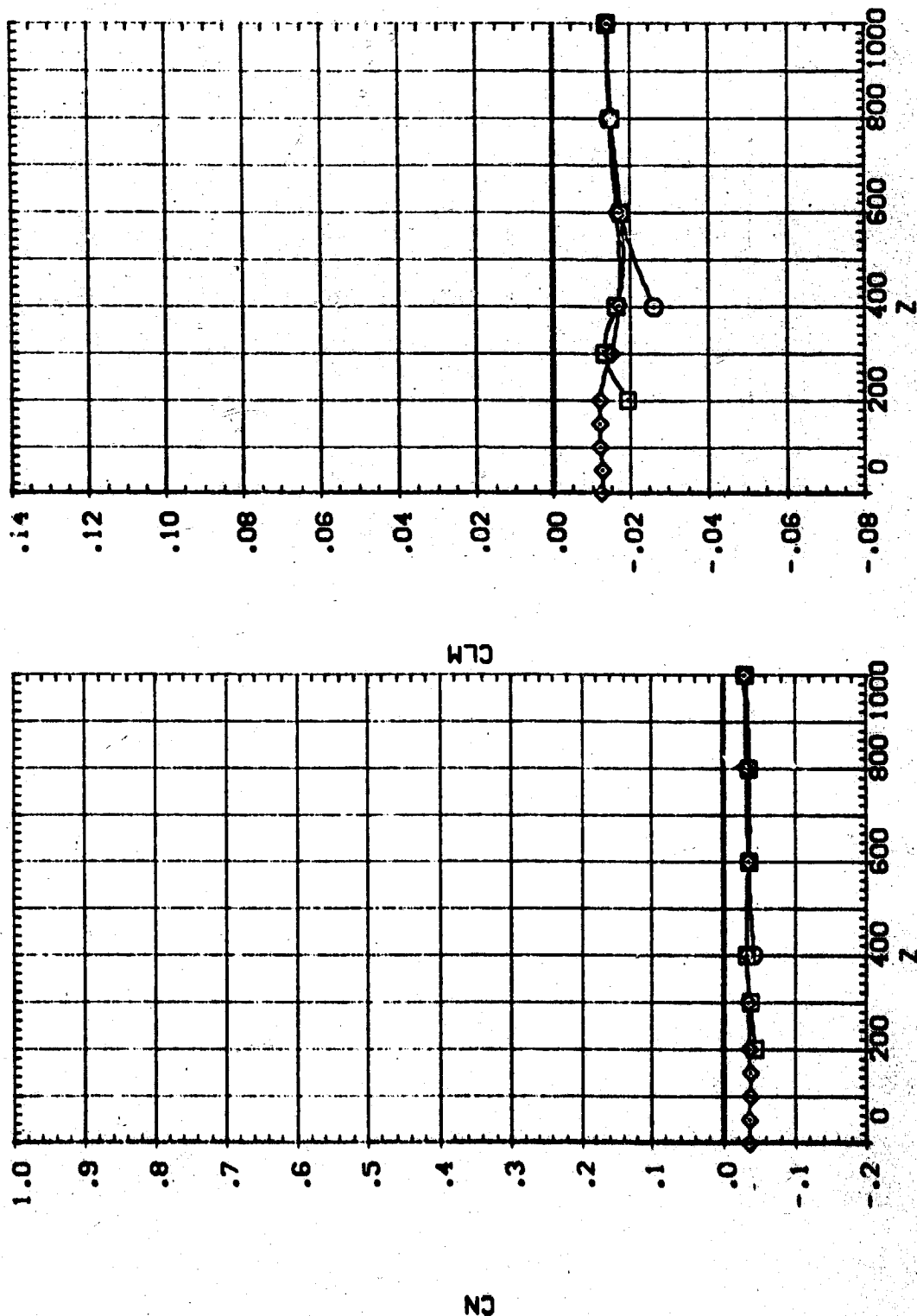


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ440)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | 1.550 | 4.510 | PTOTL 28.900 |
| □ | 200.950 | .000 | BETA 5.000 |
| ◇ | 389.530 | .000 | OETA -10.000 |
| △ | 802.180 | .000 | PO+8 1500.000 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ440)

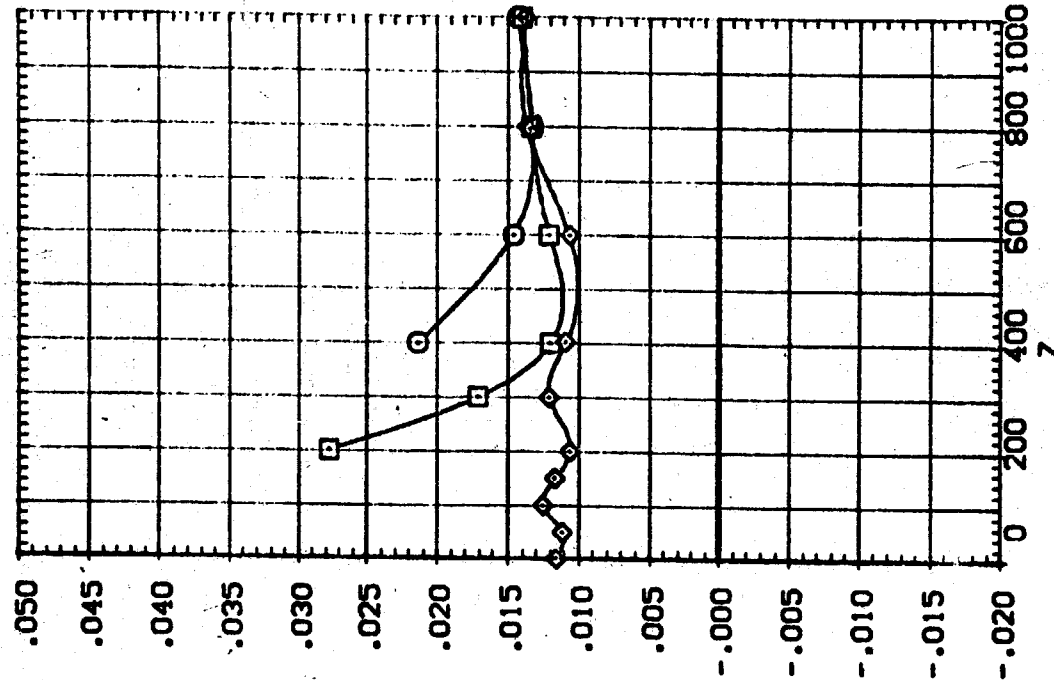
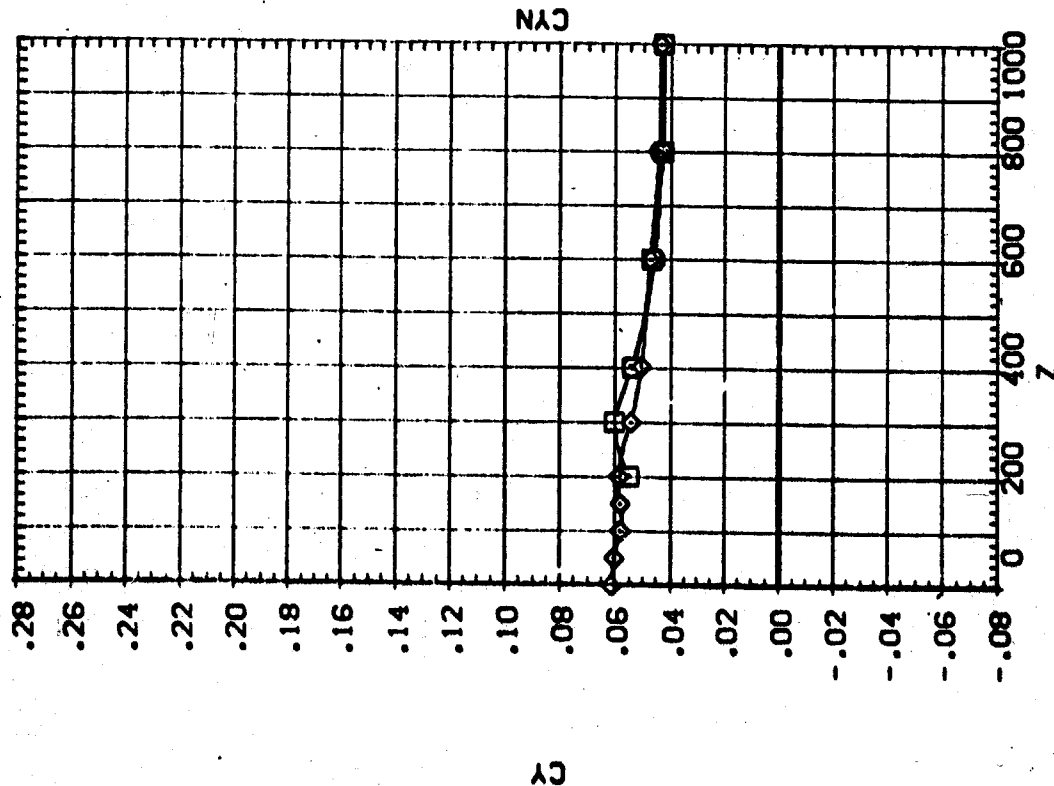
SYMBOL

○
□
◇
△

PARAMETRIC VALUES

| Y | MACH | PTOTL | BETA | DBETA | PO+P8 |
|---------|-------|--------|------|---------|----------|
| 1.550 | 4.510 | 28.900 | .000 | -10.000 | 1500.000 |
| 200.950 | | 5.000 | | | |
| 399.530 | | | | | |
| 802.180 | | | | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



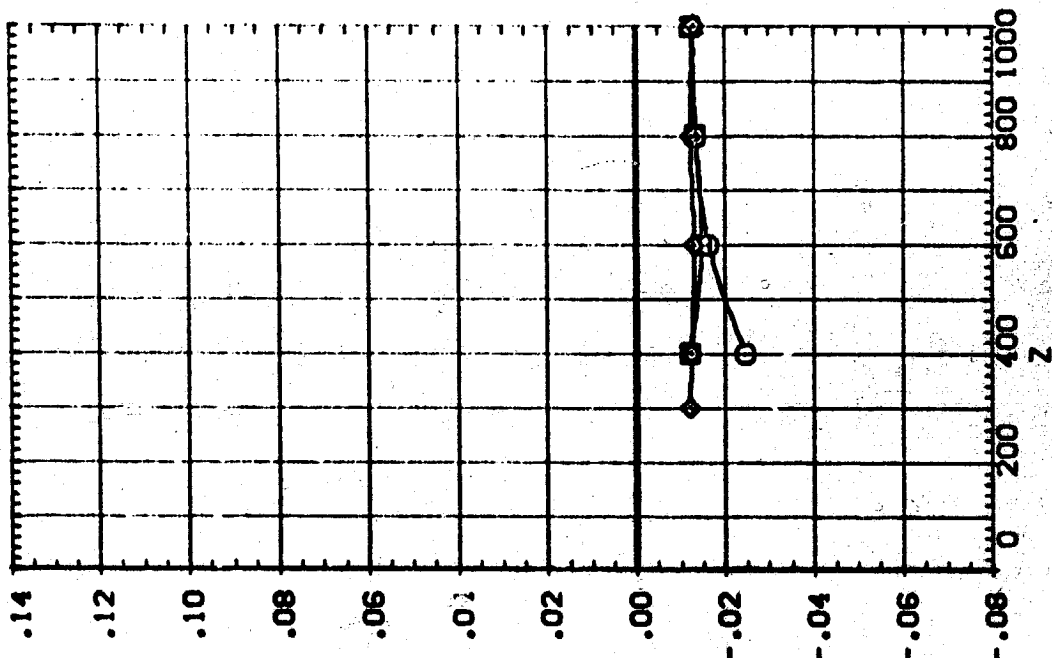
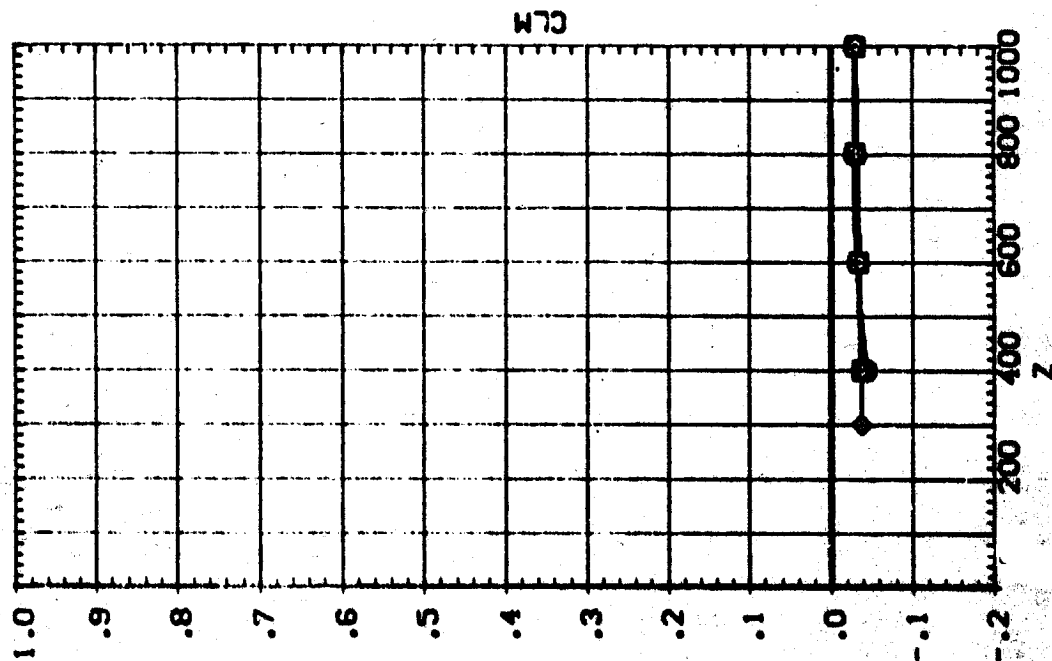
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10



1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ441)

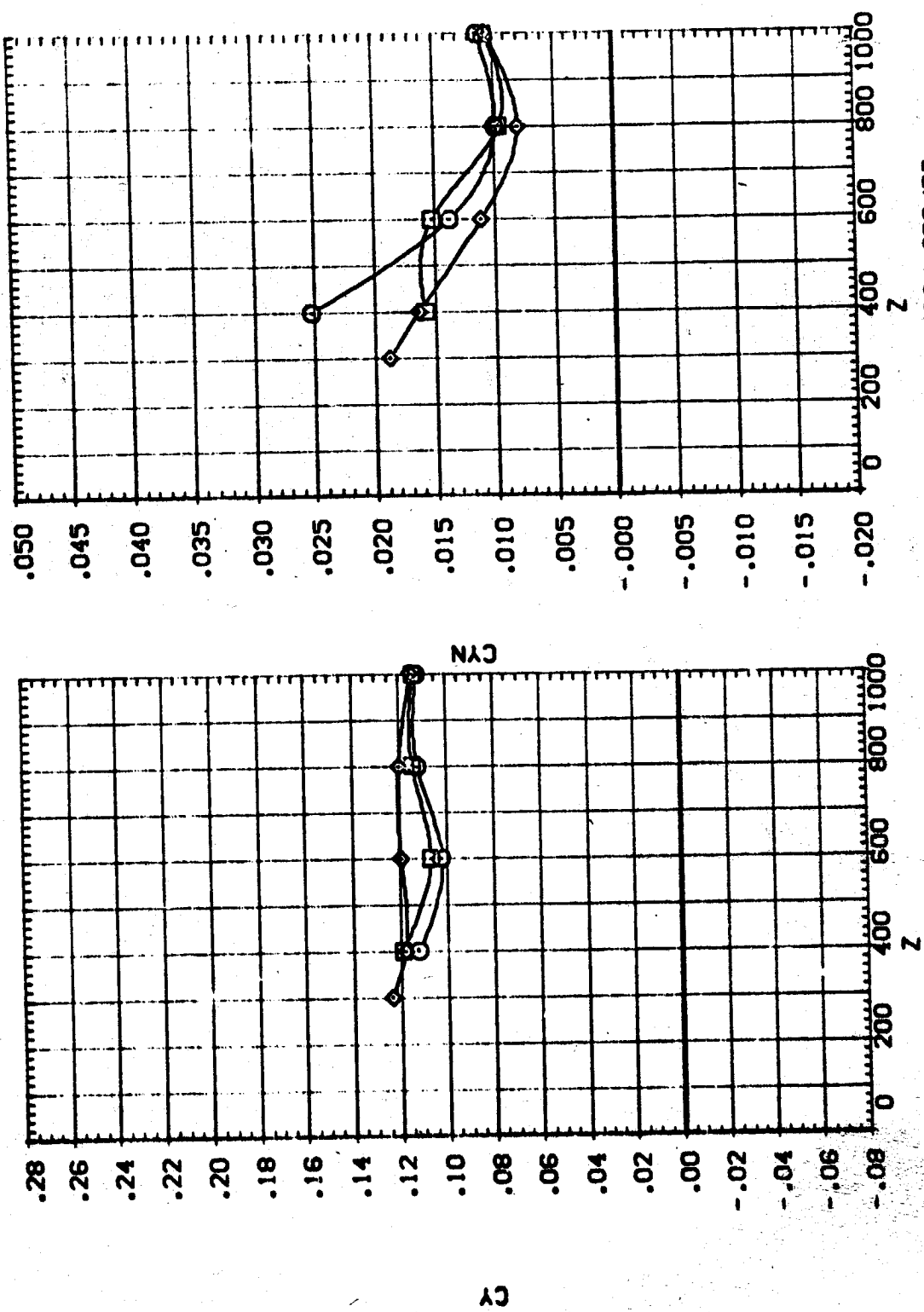
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | | |
|--------|---------|-------------------|--------|-------|-------|----------|--|
| | | .917 | MACH | 4.510 | PTOTL | 28.900 | |
| ○ | 200.800 | | ALPHA | .000 | BETA | 5.000 | |
| ◇ | 401.600 | | DALPHA | .000 | DBETA | -20.000 | |
| △ | 601.920 | X | | .000 | PC+P8 | 1500.000 | |



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | V | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | .507 | 4.510 | PTOTL 28.900 |
| □ | 200.000 | .000 | BETA 5.000 |
| ◇ | 401.880 | .000 | DBETA -20.000 |
| △ | 801.520 | .000 | PC+8 1500.000 |

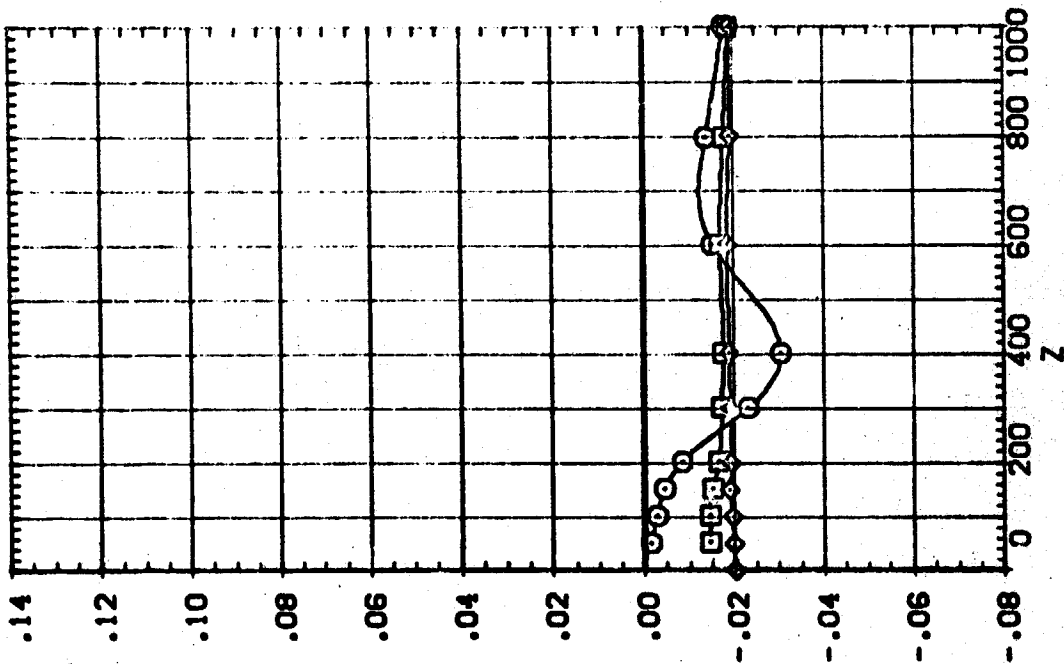
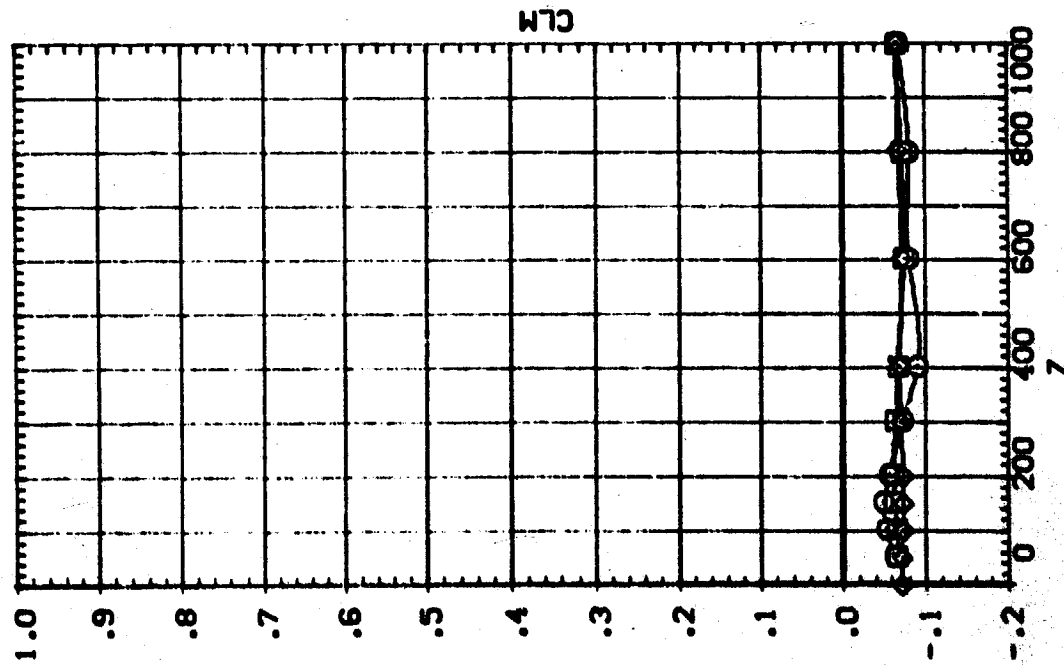


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ442)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTL | BETA | DBETA | PC+PB |
|--------|---------|--------|-------------------|--------|-------|-------|----------|
| ○ | -0.038 | 4.510 | | 28.900 | 5.000 | | |
| □ | 199.340 | .000 | | | 5.000 | | |
| ◇ | 398.700 | -5.000 | | | 5.000 | | |
| | | X | .000 | | | | 1500.000 |

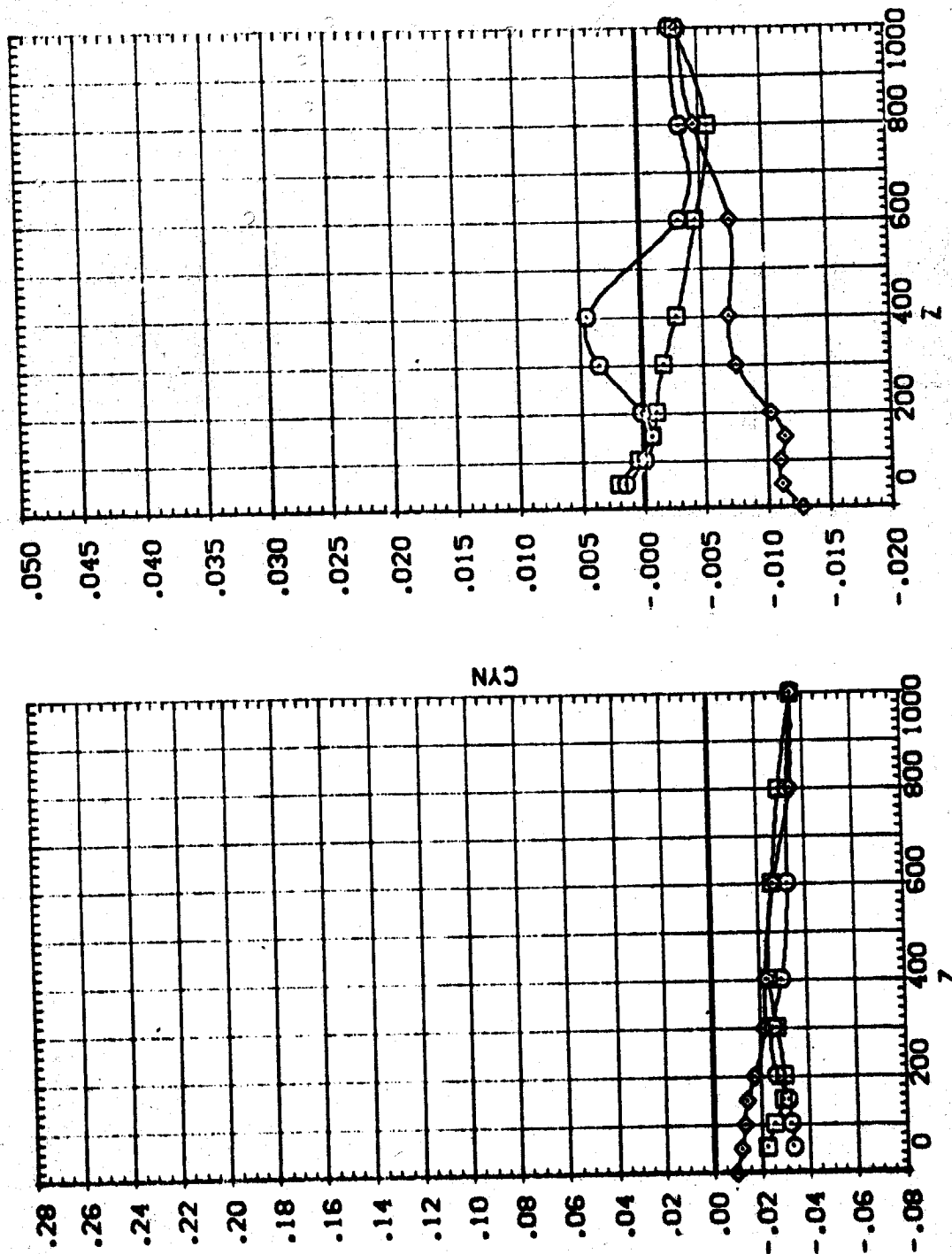


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL: \square \square \diamond

| PARAMETRIC VALUES | |
|-------------------|----------|
| MACH | 28.900 |
| PTOTL | 5.000 |
| BETA | 5.000 |
| DBETA | 5.000 |
| PC#8 | 1500.000 |
| ALPHA | .000 |
| DALPHA | .000 |
| X | 388.700 |
| Y | -0.088 |

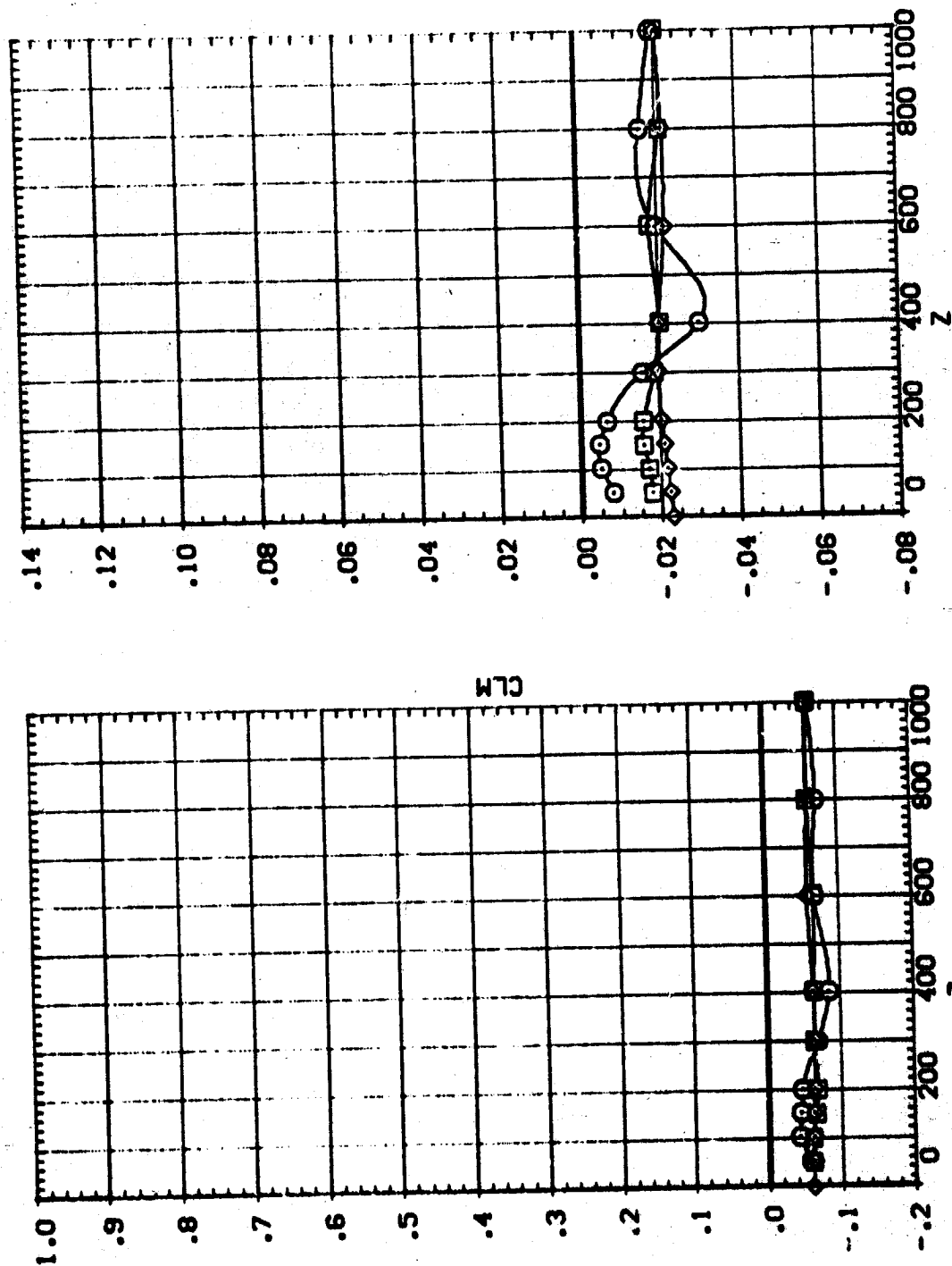


SRB V/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ443)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | 1.627 | MACH | PARAMETRIC VALUES | 28.900 |
|--------|---------|--------|--------|-------------------|----------|
| ○ | 158.050 | 4.510 | PTOTL | BETA | 5.000 |
| □ | 401.150 | .000 | ALPHA | DBETA | .000 |
| ◇ | 900.670 | -5.000 | DALPHA | PC-#8 | 1500.000 |
| △ | | x | | | |



[A13,SRB(S8)]WITH PLUMES SEPARATING FROM 09T10 (RTJ443)

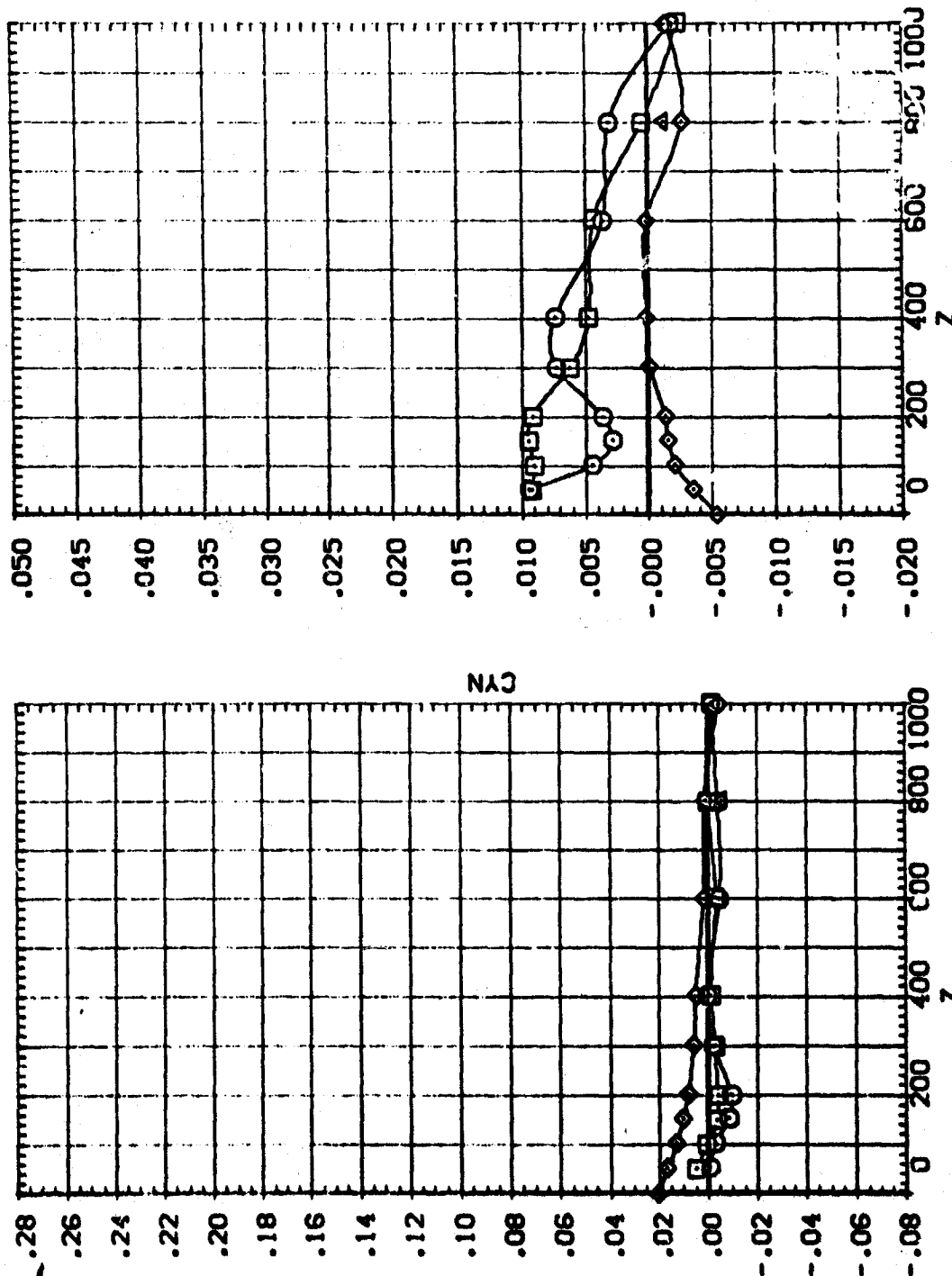
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| Y | MAOH | PTOTL | 28.900 |
|---------|-------|--------|----------|
| 1.627 | 4.510 | BETA | 5.000 |
| 198.680 | ALPHA | -5.000 | DBETA |
| 401.150 | ALPHA | PC+P8 | 1500.000 |
| 800.670 | X | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

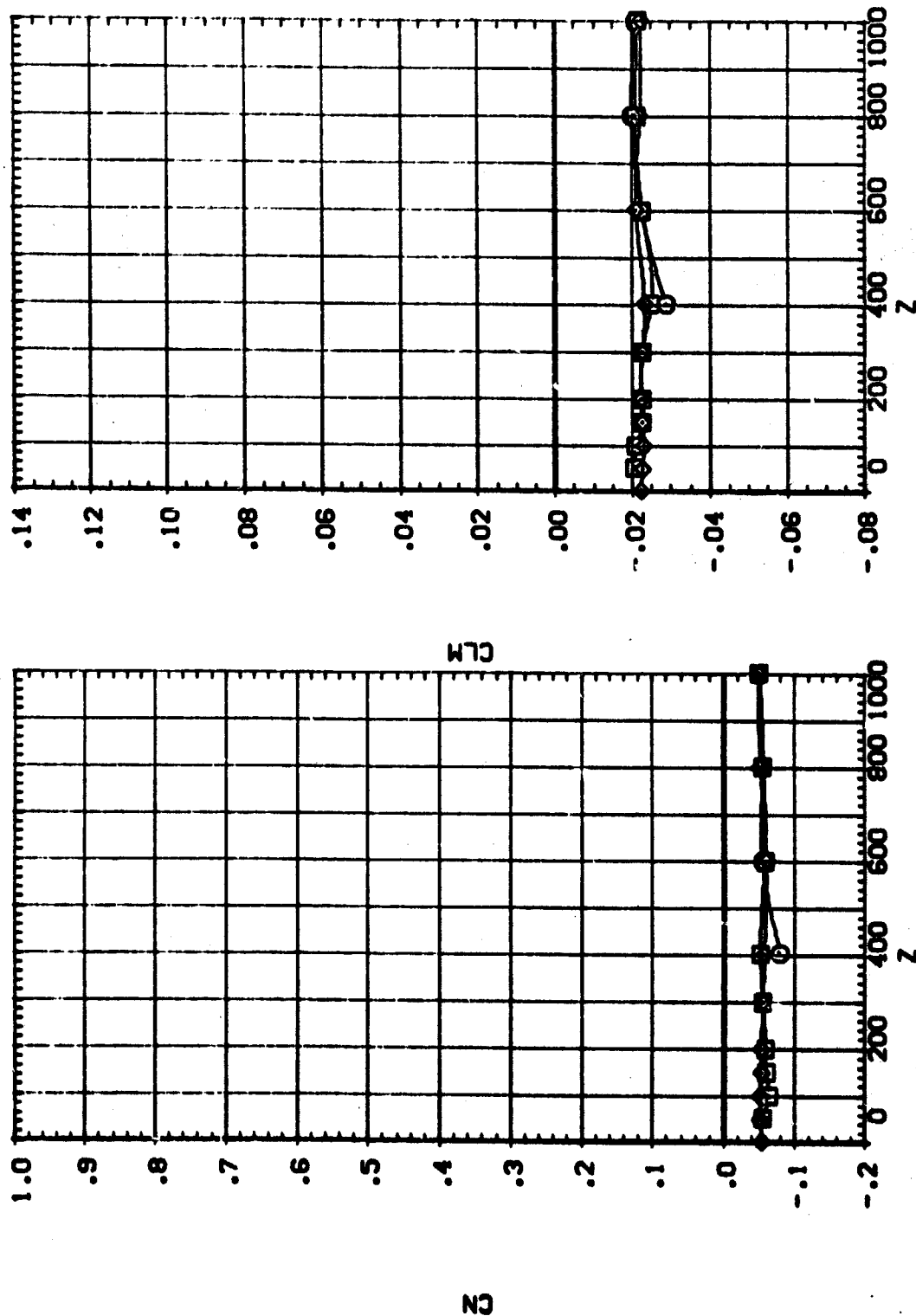


SR8 W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ444)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|--------|--------|----------|
| | Y | MACH | PIDOTL | 20.900 |
| ○ | 200.060 | .000 | BETA | 5.000 |
| □ | 399.400 | -5.000 | DBETA | -5.000 |
| ◇ | 800.070 | .000 | PO+8 | 1500.000 |
| △ | | X | | |



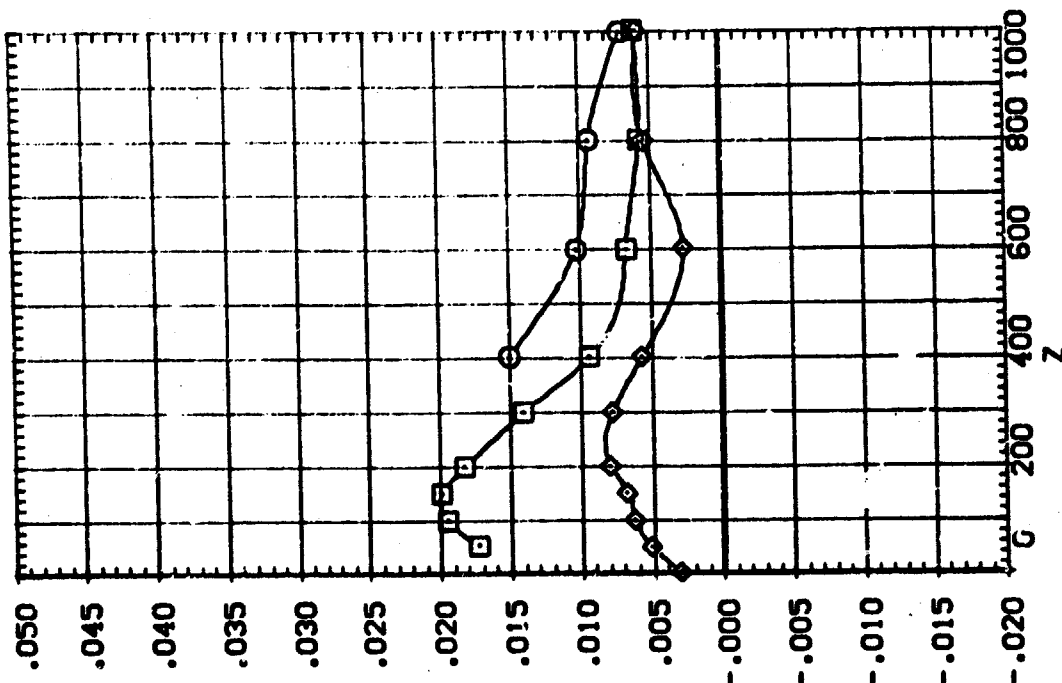
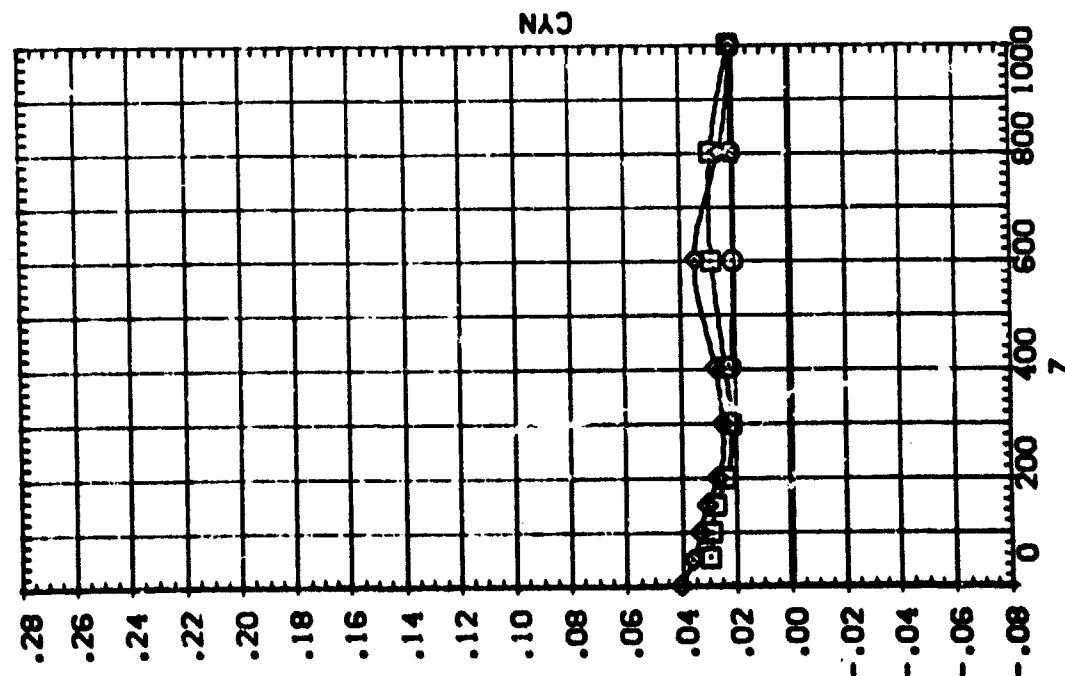
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

PARAMETRIC VALUES

| Y | WACH | PIOTL | 20.900 |
|---------|--------|-------|----------|
| -0.005 | 0.000 | BETA | 5.000 |
| 200.000 | -5.000 | DBETA | -5.000 |
| 300.400 | 0.000 | PC+8 | 1500.000 |
| 800.070 | X | | |

SYMBOL
 ○ □ ◇ △

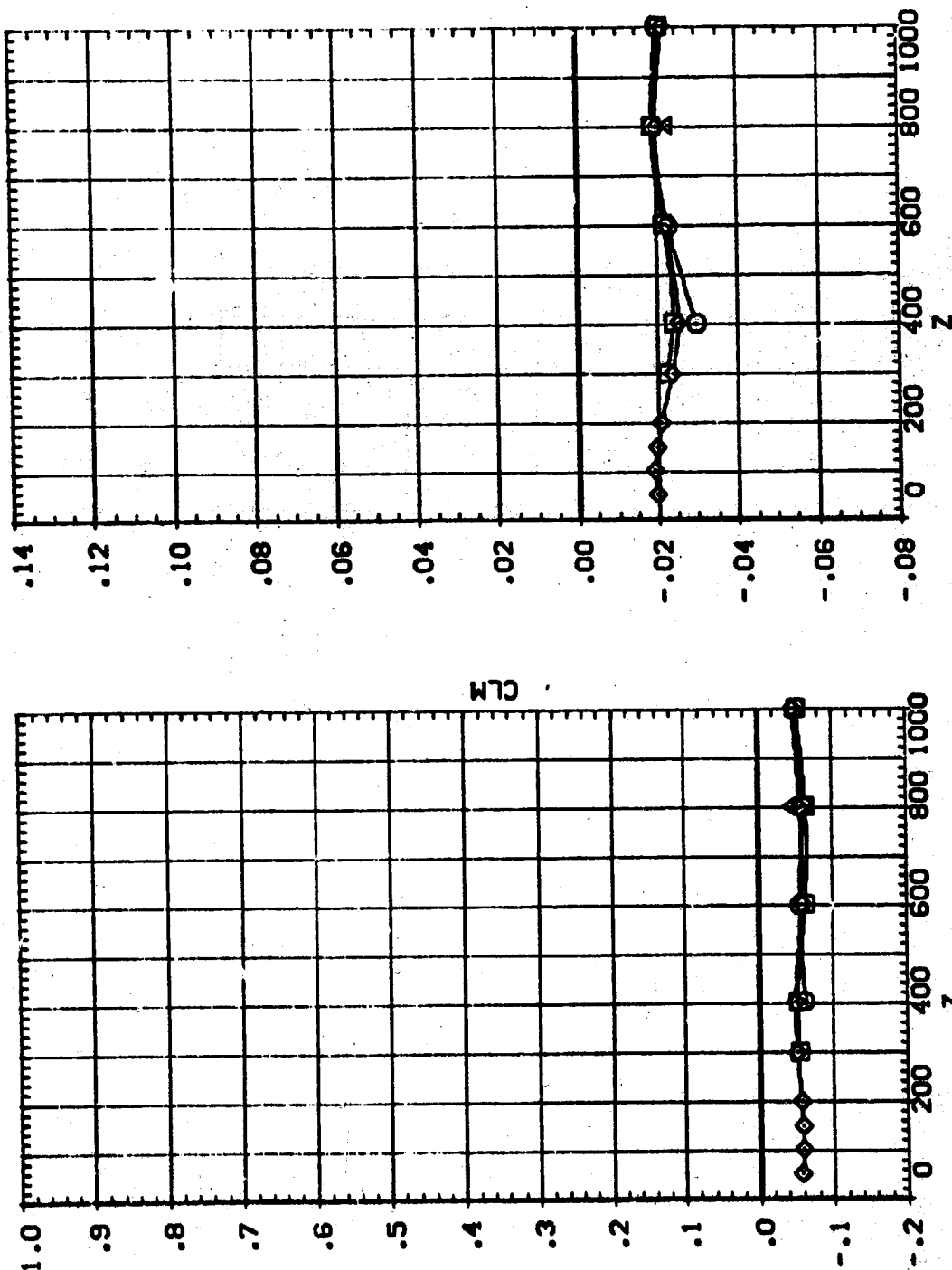


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORG. ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ445)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PTOTL | BETA | DBETA | PC-HB |
|--------|---------|--------|-------------------|-------|------|-------|-------|
| ○ | .385 | 4.510 | 28.500 | | | | |
| □ | 200.690 | .000 | 5.000 | | | | |
| ◇ | 400.640 | -5.000 | -10.000 | | | | |
| △ | 799.640 | .000 | 1500.000 | | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ445)

SYMBOL

Y

□

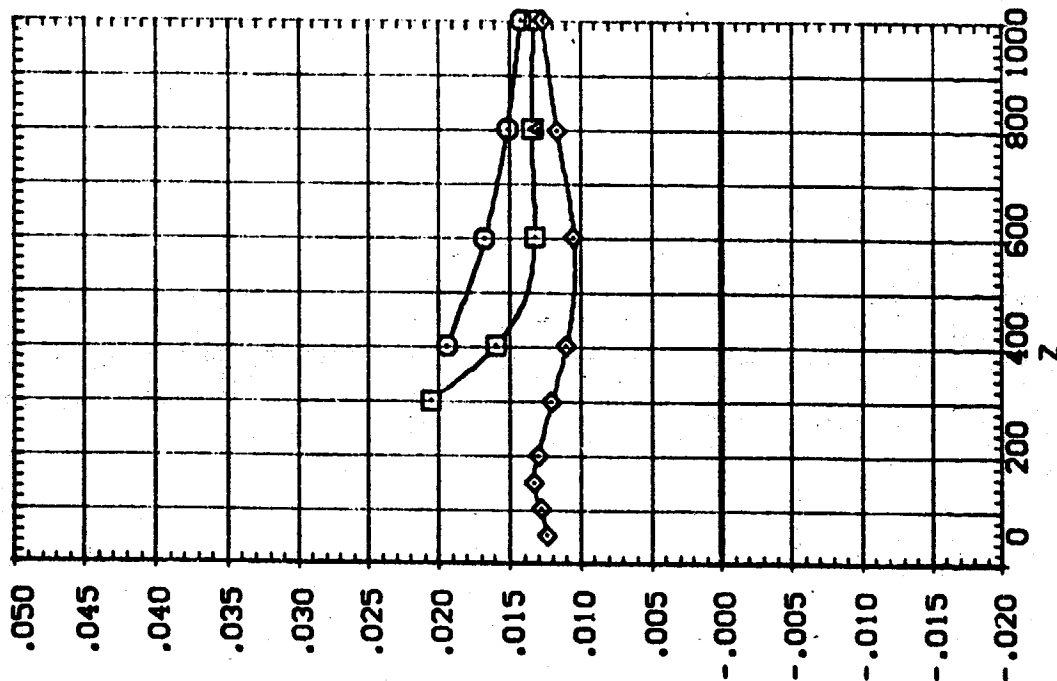
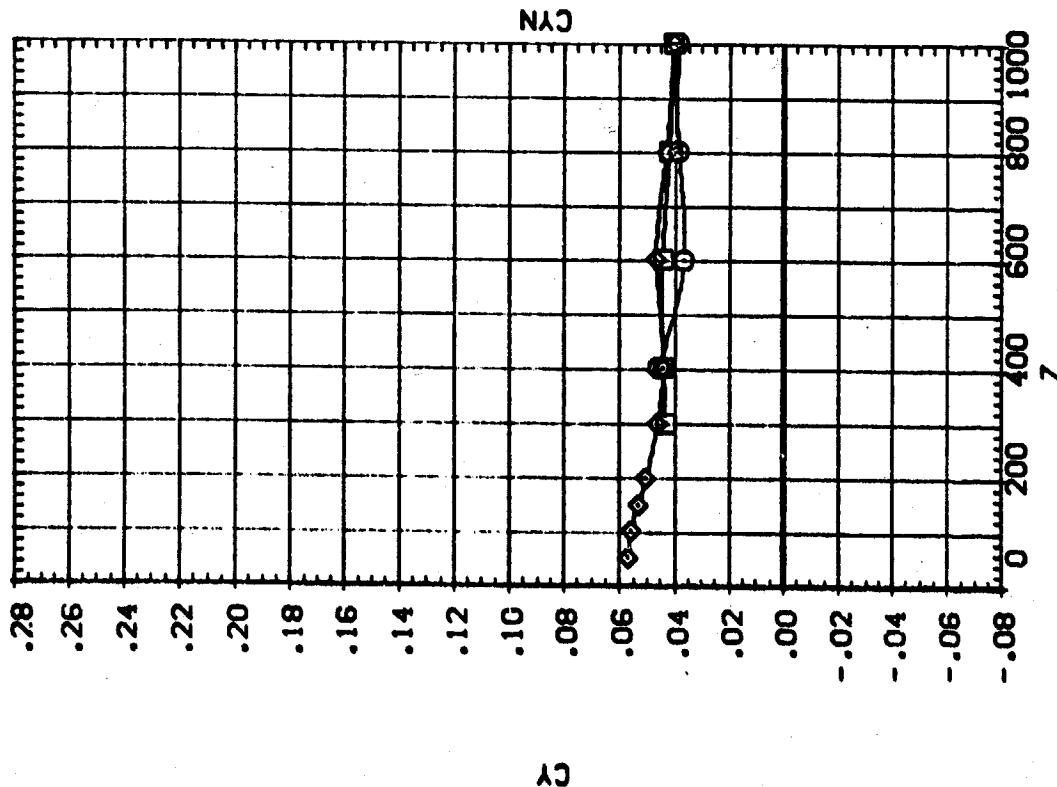
◇

△

PARAMETRIC VALUES

.386 MACH 28.90
200.890 ALPHA 5.000
400.640 DALPHA -5.000 DBETA -10.000
799.640 X .000 PC+8 1500.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

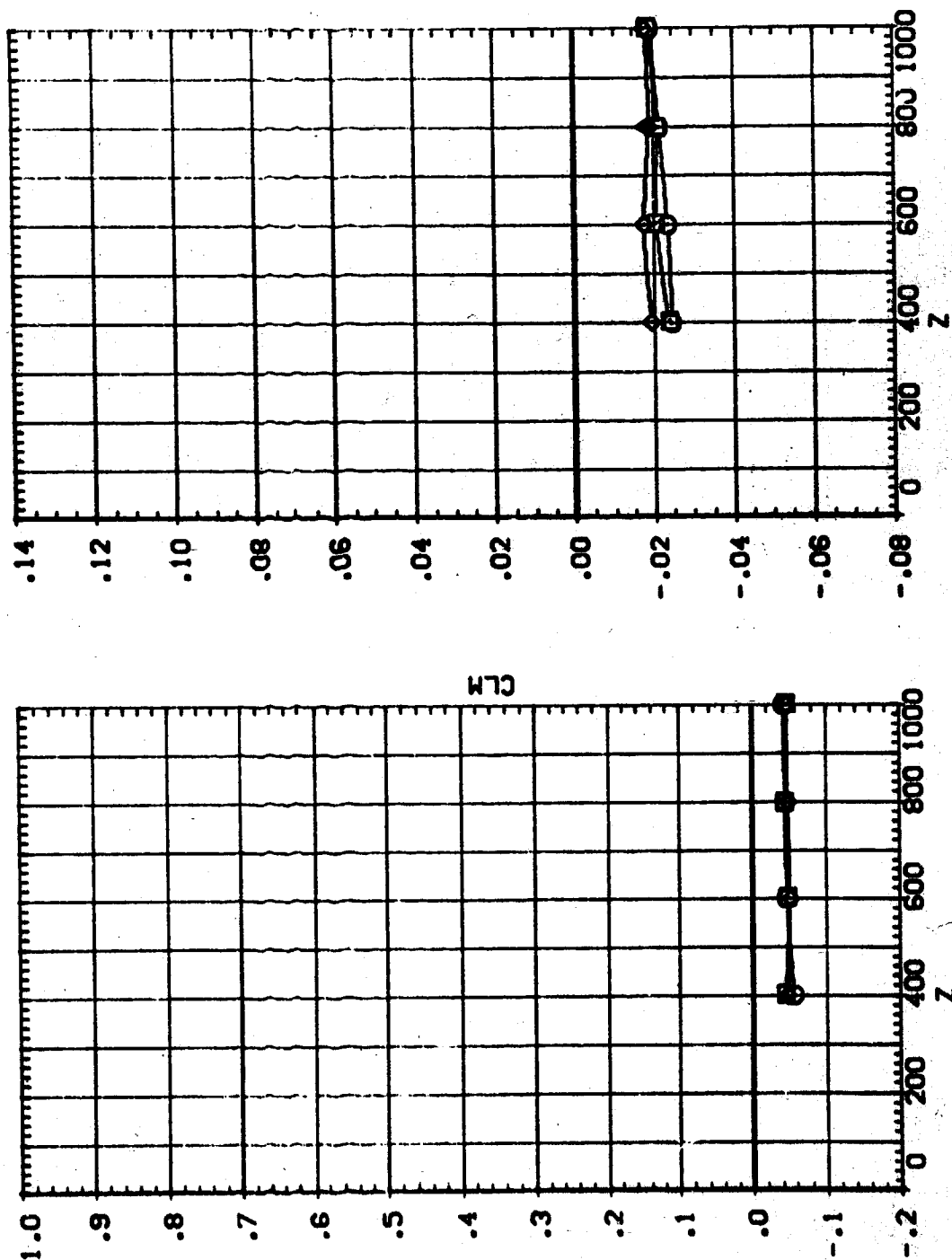


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ446)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|--------|-------------------|
| ○ | -1.492 | 4.510 | PTOTL 28.900 |
| □ | 200.660 | .000 | BETA 5.000 |
| ◇ | 400.590 | -5.000 | DBETA -20.000 |
| △ | 800.830 | .000 | PO+PB 1500.000 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

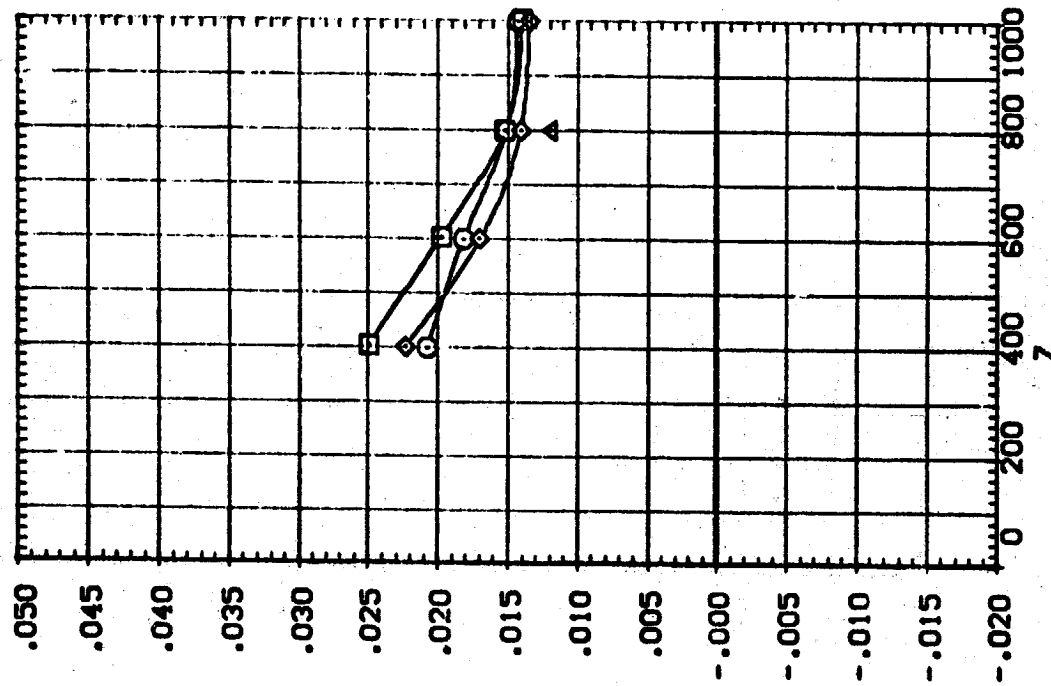
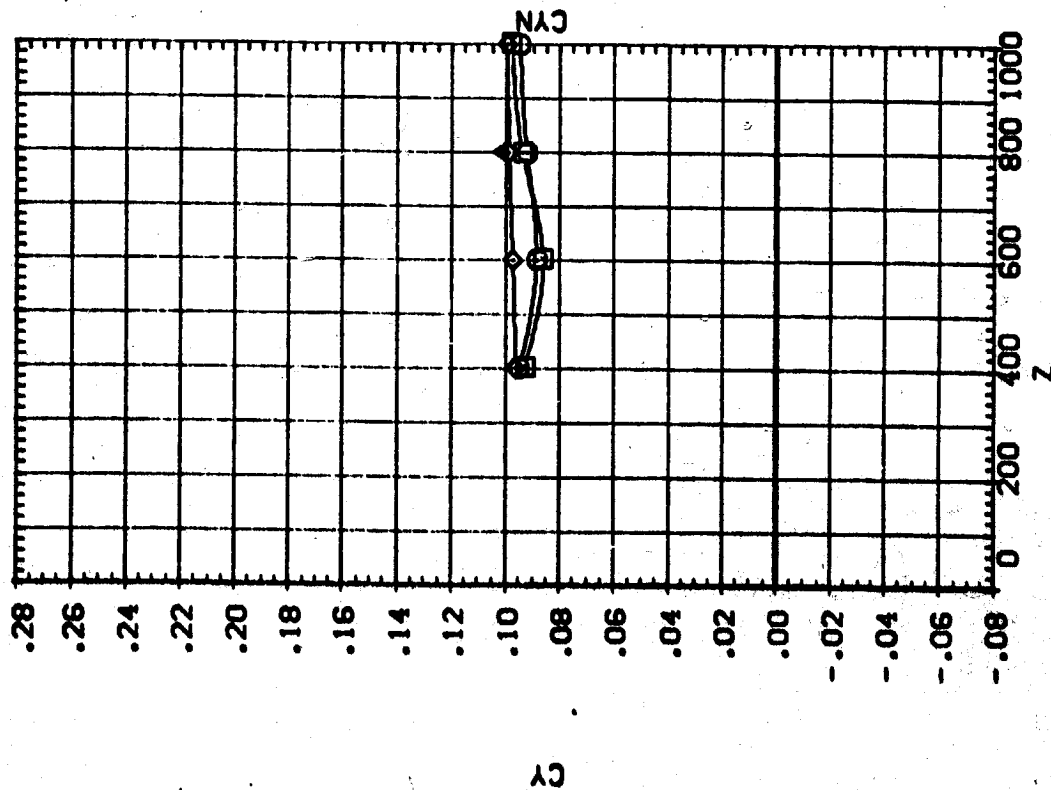
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ446)

SYMBOL

Y
-1.432
200.680
400.590
600.630

PARAMETRIC VALUES
MCH 4.510
ALPHA .000
DALPHA -5.600
X .000
POTL 28.900
BETA 5.000
DBETA -20.000
PCMB 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

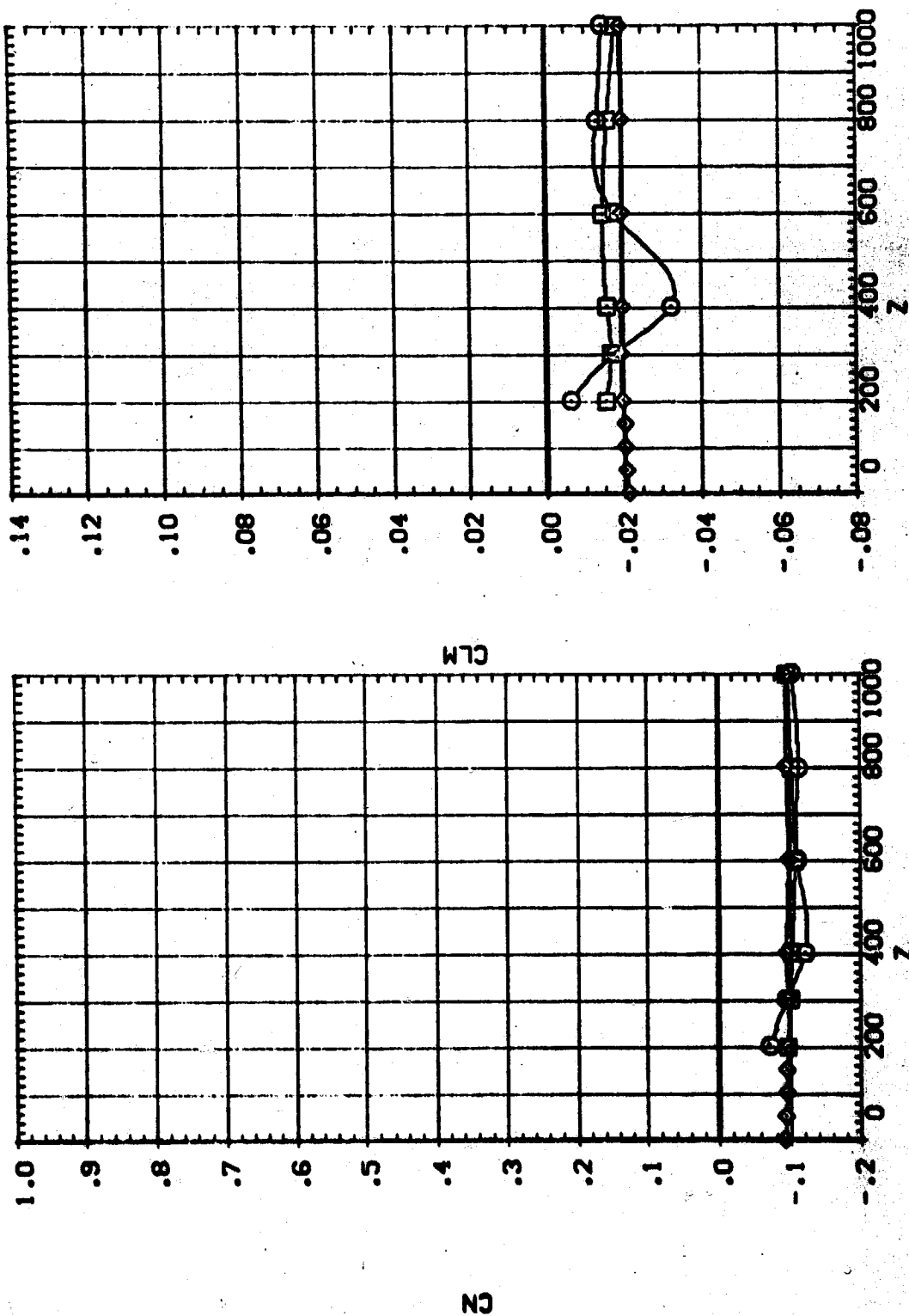


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ447)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | PTOTL |
| 0.153 | 20.900 |
| 200.300 | BETA |
| 400.510 | 5.000 |
| ALPHA | DBETA |
| -10.000 | 5.000 |
| DAUPA | PO+8 |
| X | 1500.000 |

SYMBOL
○
□
◇



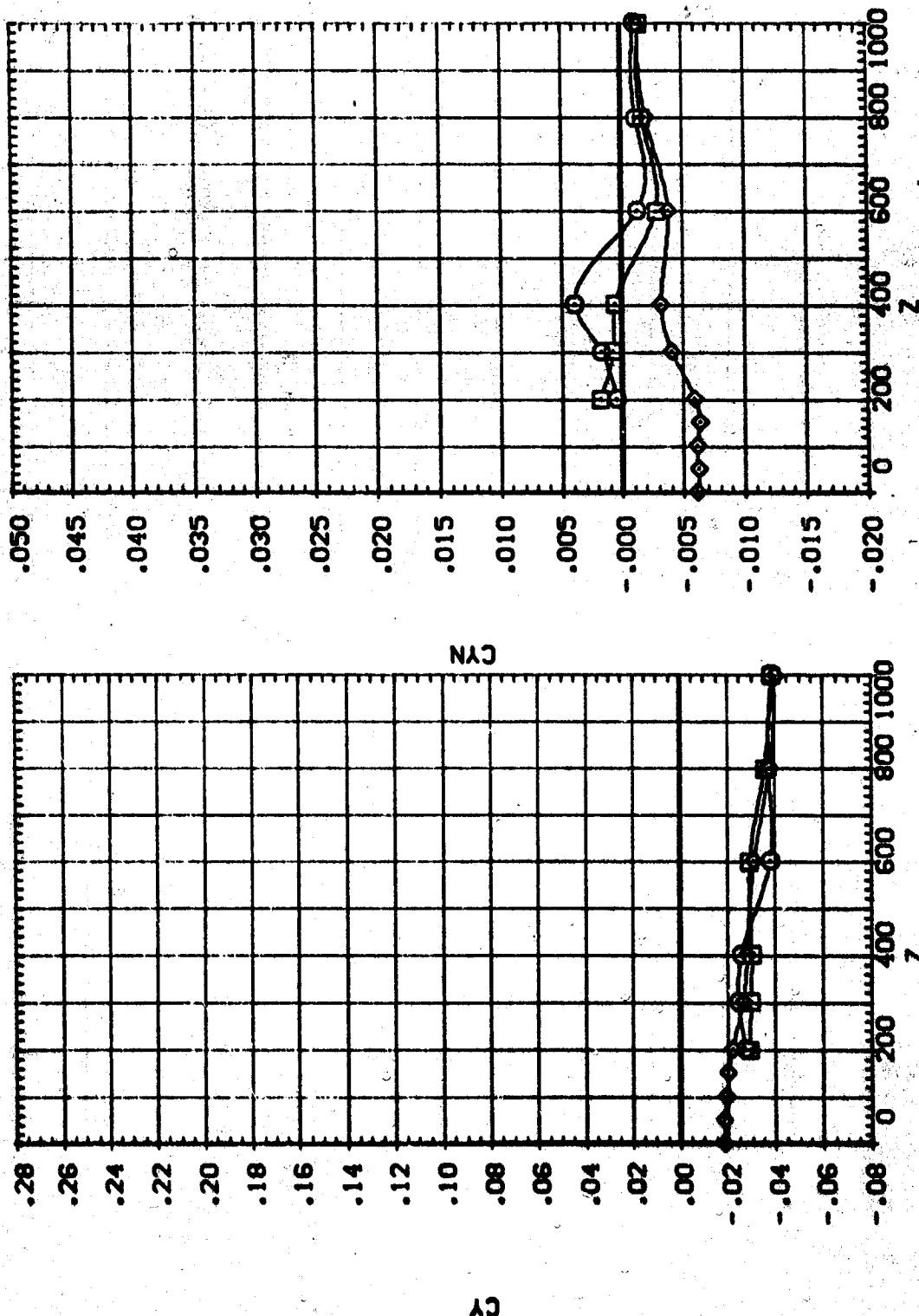
SRB V/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

PARAMETRIC VALUES

| Y | MOI | PTOTL | 28.900 |
|---------|---------|-------|----------|
| .153 | 4.510 | BETA | 5.000 |
| 200.300 | .000 | DETA | 5.000 |
| 400.510 | -10.000 | PO+P8 | 1500.000 |
| X | .000 | | |

SYMBOL
○
□
◇

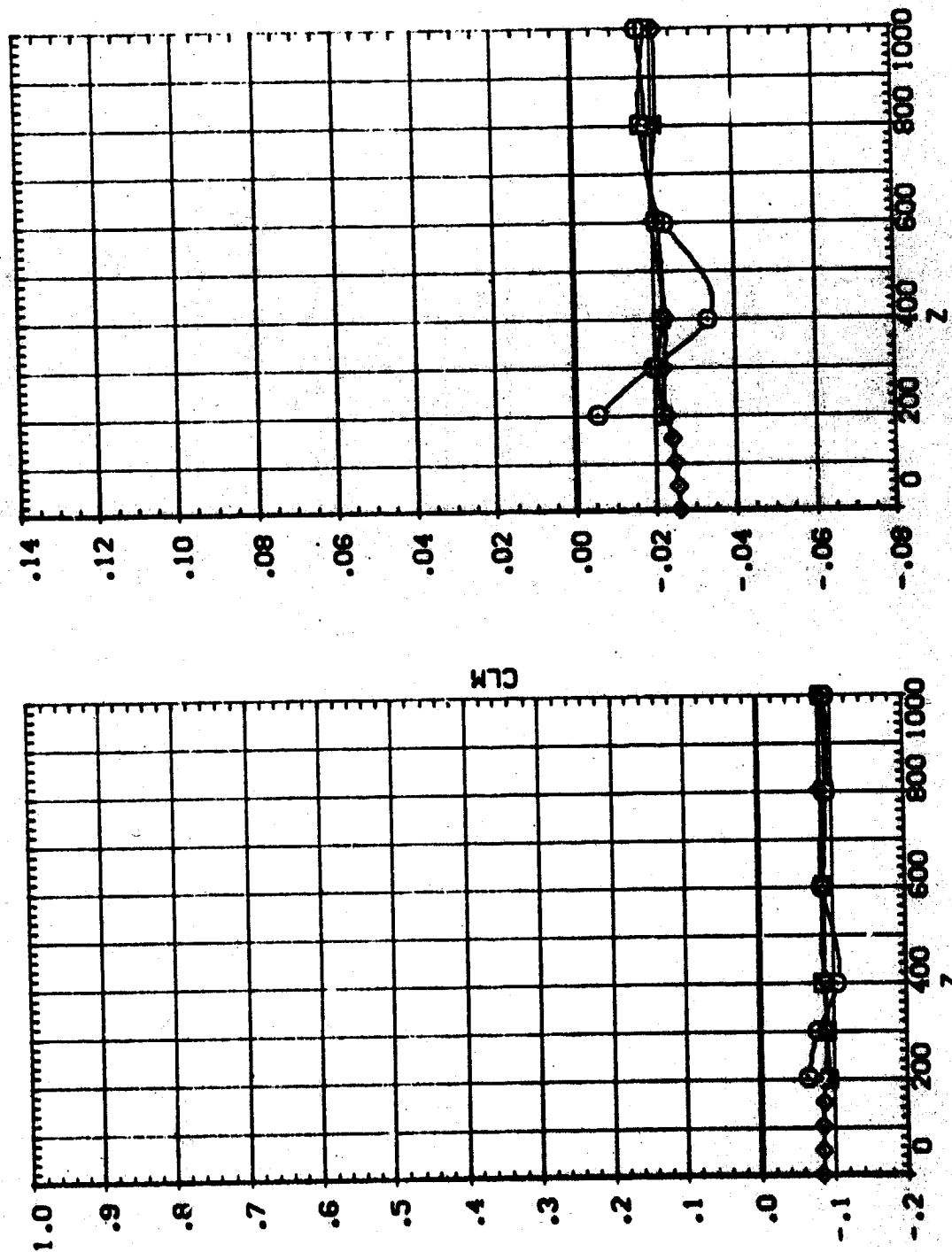


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ448)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

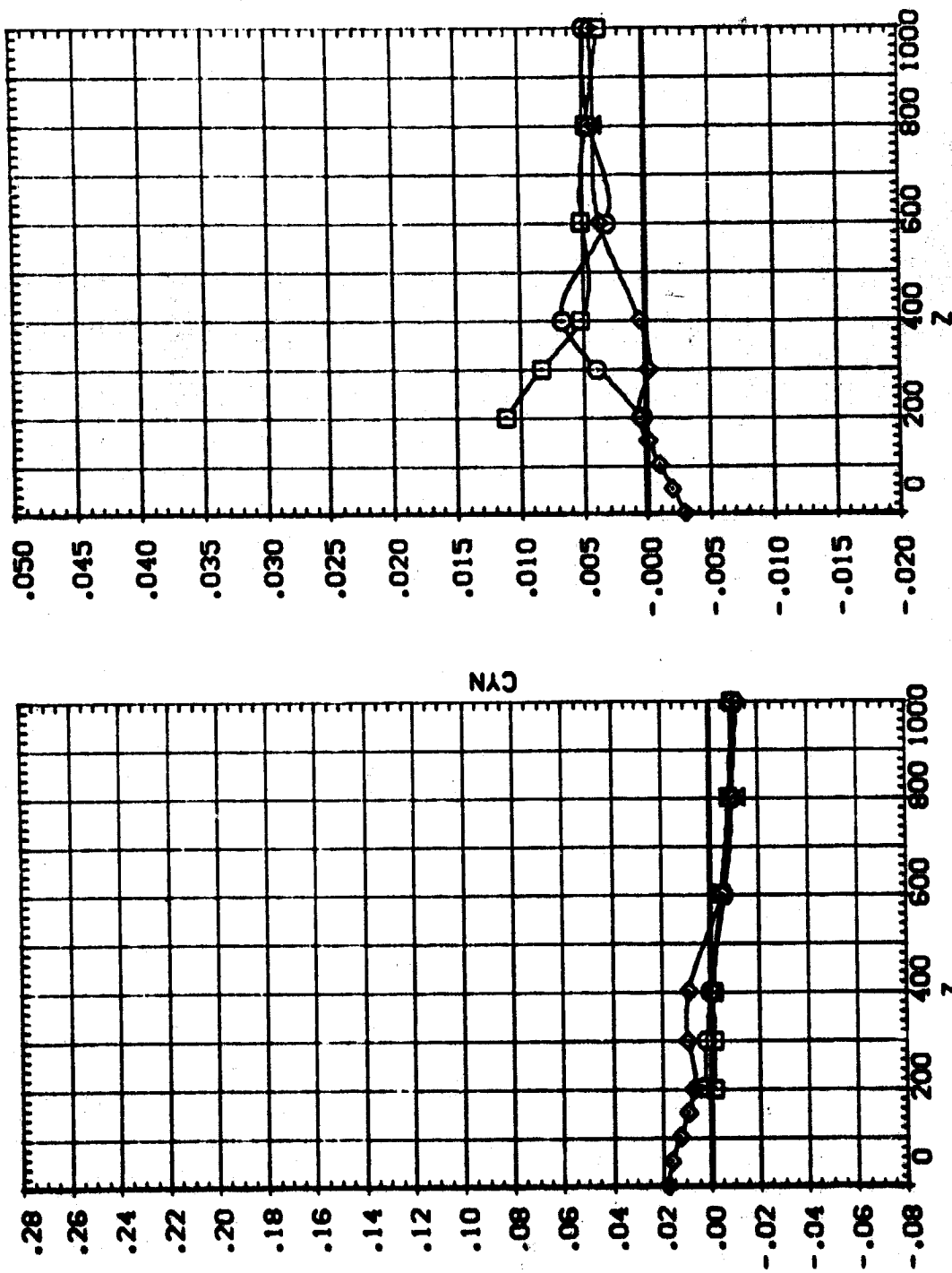
| SYMBOL | Y | WCH | PARAMETRIC VALUES | 20.900 |
|--------|---------|---------|-------------------|----------|
| □ | .883 | 4.510 | PTOTL | 5.000 |
| ◇ | 200.170 | .000 | BETA | .000 |
| △ | 399.740 | -10.000 | PC+8 | 1500.000 |
| | 600.810 | .000 | | |



IA13.SRB(SB)WITH PLUMES SEPARATING FROM 09T10 (RTJ448)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | 20.000 |
|--------|---------|-------|-------------------|--------|
| ○ | 200.170 | ALPHA | 4.510 | P10TL |
| □ | 300.740 | BETA | .000 | BETA |
| ◇ | 400.810 | DELTA | -10.000 | DELTA |
| △ | 500.000 | X | .000 | PO+8 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/EI

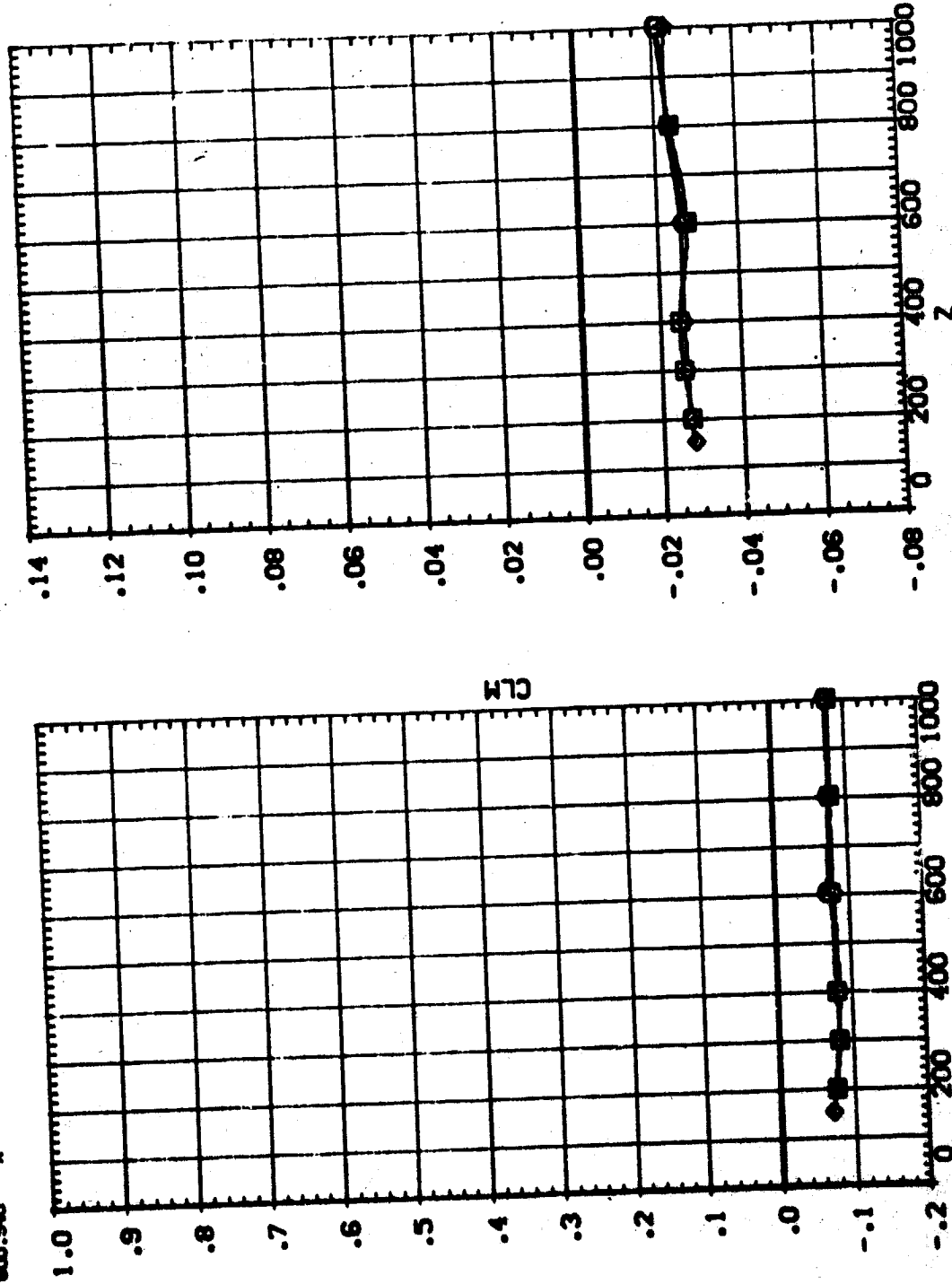


IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ449)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL
□
◇
△

| PARAMETRIC VALUES | | | |
|-------------------|--------|-------|----------|
| Y | WCH | PTOTL | 28.800 |
| 128.780 | ALPHA | BETA | 5.000 |
| 389.880 | DALPHA | DBETA | -5.000 |
| 800.940 | X | PC448 | 1500.000 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM SRB/EI

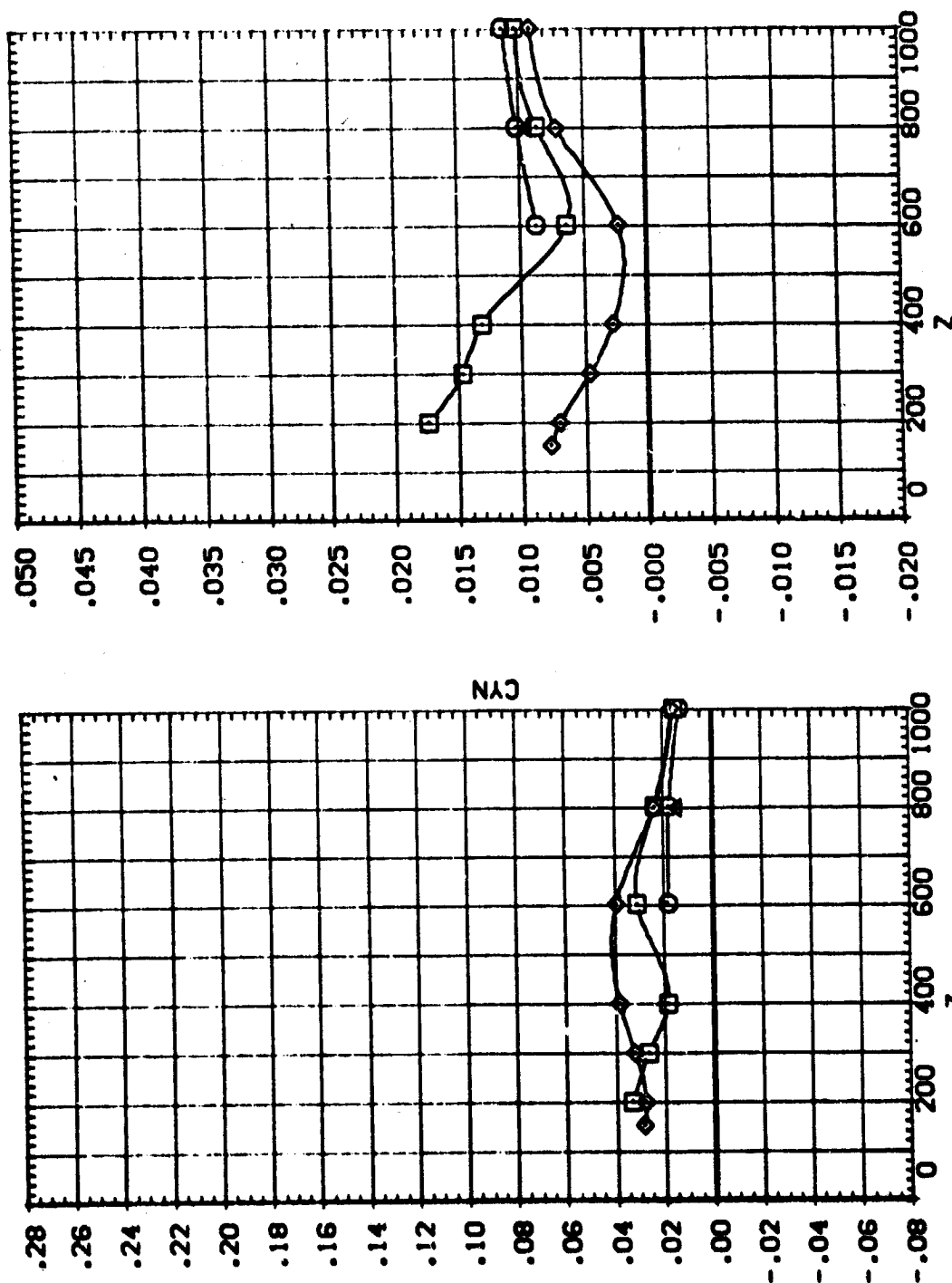
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ449)

SEE THE ASSOCIATED DATA
DECLINENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

PARAMETRIC VALUES

| Y | WCH | ALPHA | BETA | DBETA | PO+8 |
|---------|---------|-------|------|-------|----------|
| .342 | 4.510 | .000 | .000 | .000 | 20.500 |
| 199.780 | .000 | .000 | .000 | .000 | 5.000 |
| 209.680 | -10.000 | .000 | .000 | .000 | -5.000 |
| 800.940 | X | .000 | .000 | .000 | 1500.000 |

SYMBOL
○ □ ◇ △

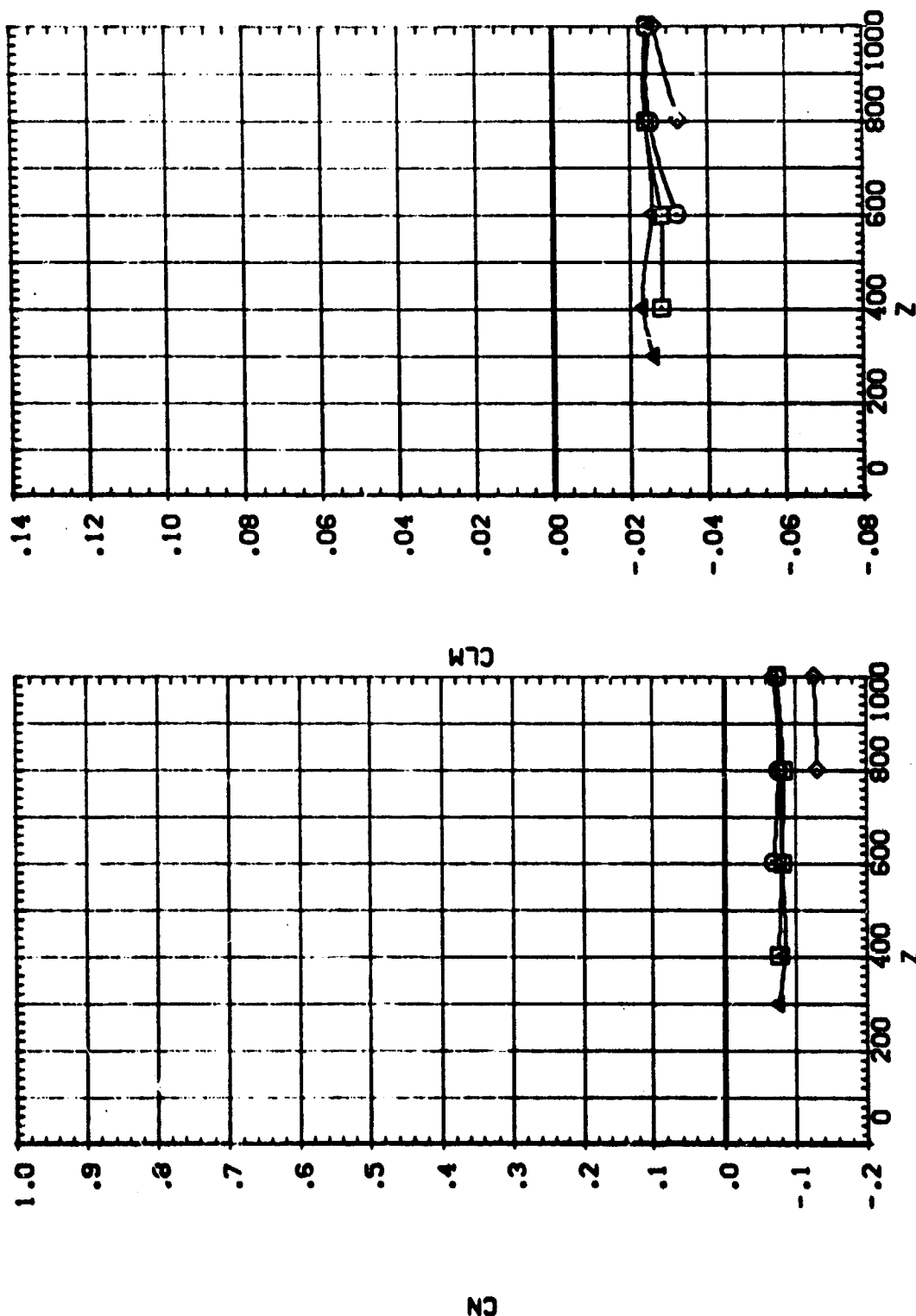


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ450)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | WCH | PARAMETRIC VALUES | 20.000 |
|--------|---------|--------|-------------------|----------|
| □ | 200.700 | ALPHA | 4.510 | POTL |
| ◇ | 200.130 | DALPHA | .000 | BETA |
| △ | 200.200 | X | -10.000 | DBETA |
| | | | .000 | PO+8 |
| | | | | 1500.000 |

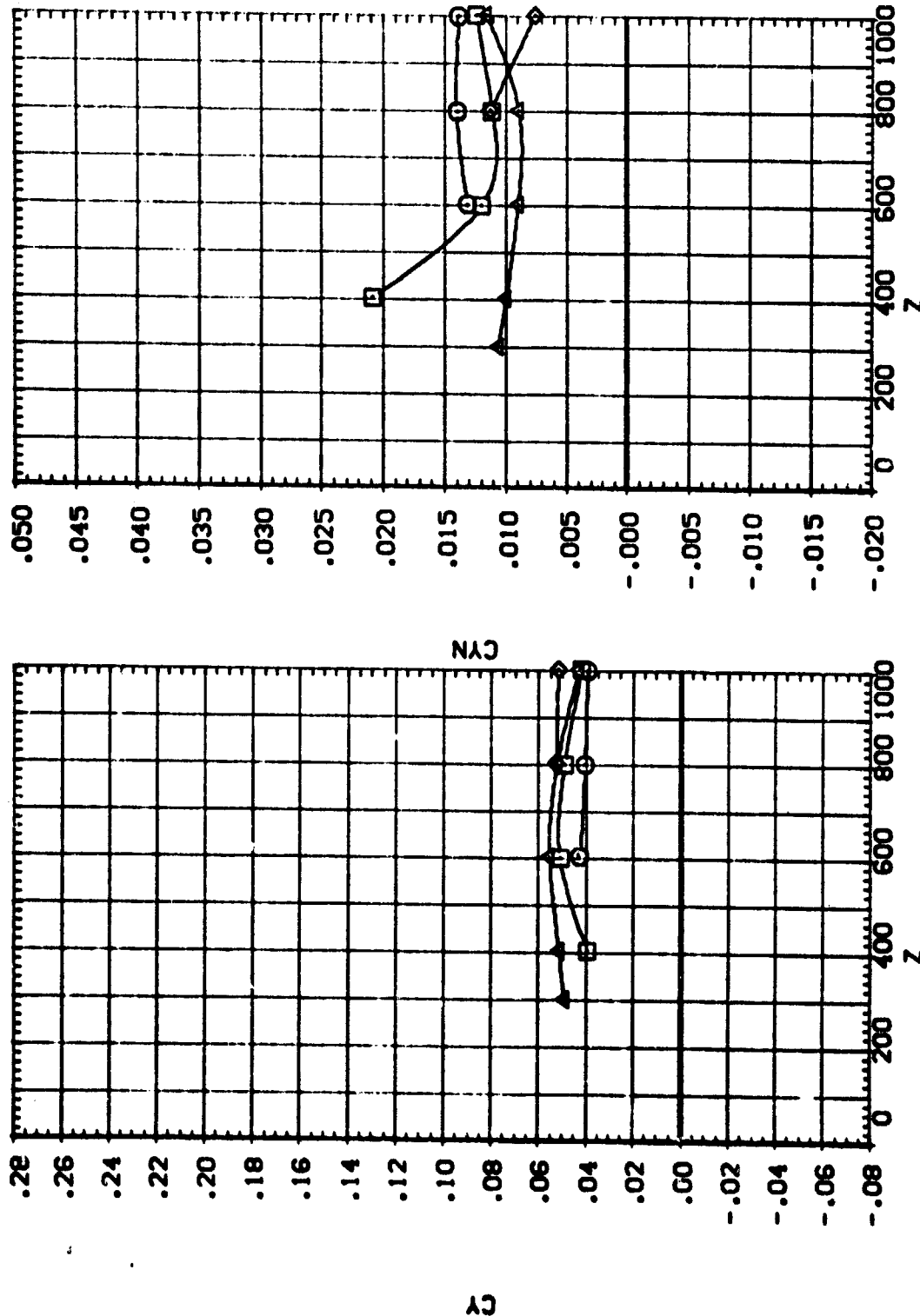


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM SRB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ450)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | WAOH | PARAMETRIC VALUES | 20.000 |
|--------|---------|--------|-------------------|----------|
| ○ | 200.700 | ALPHA | 4.510 | P101L |
| □ | 203.170 | DALPHA | .000 | BETA |
| ◇ | 300.700 | X | -10.000 | DBETA |
| △ | | | .000 | PCMB |
| | | | | 1500.000 |

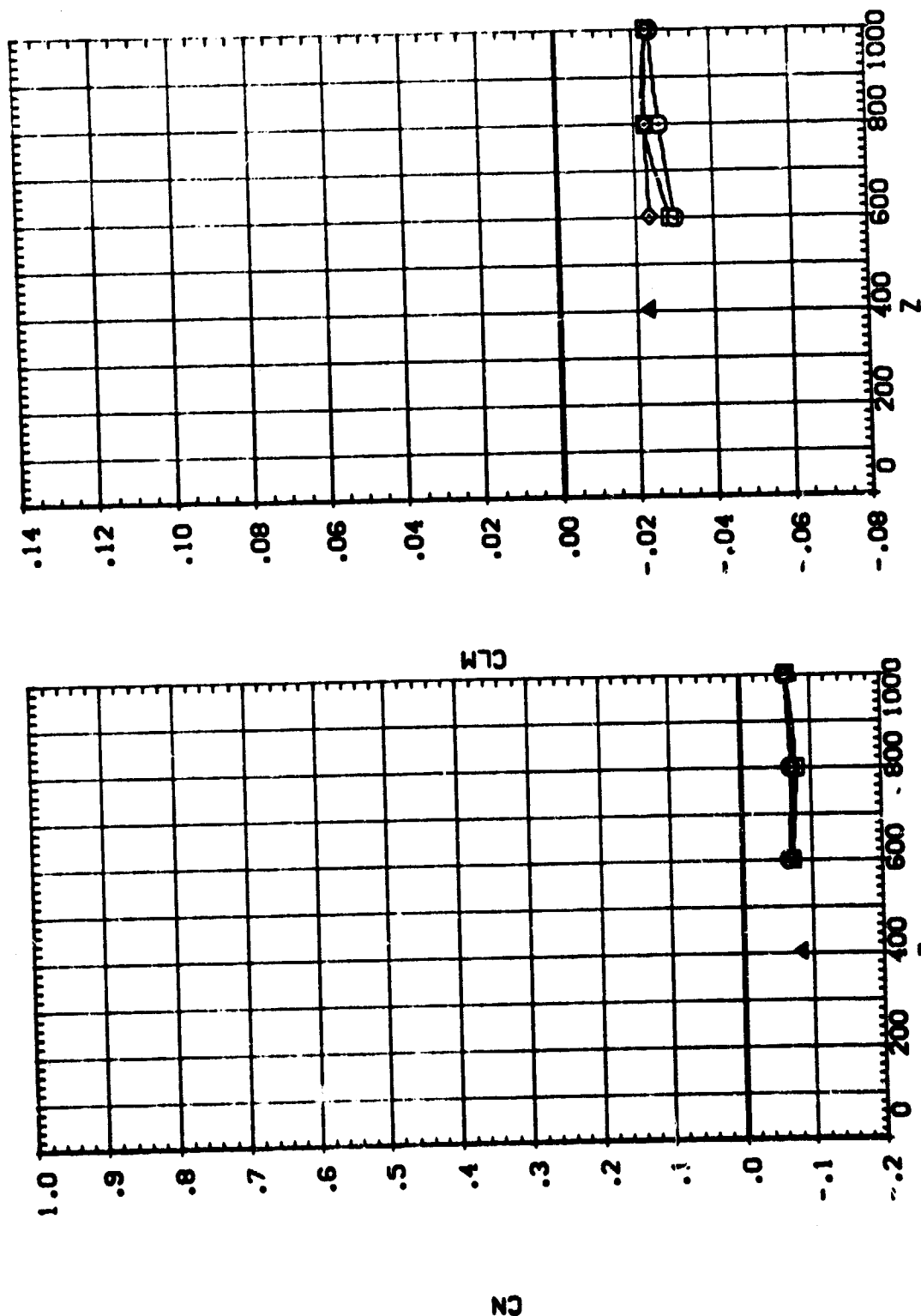


SRB V/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ451)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

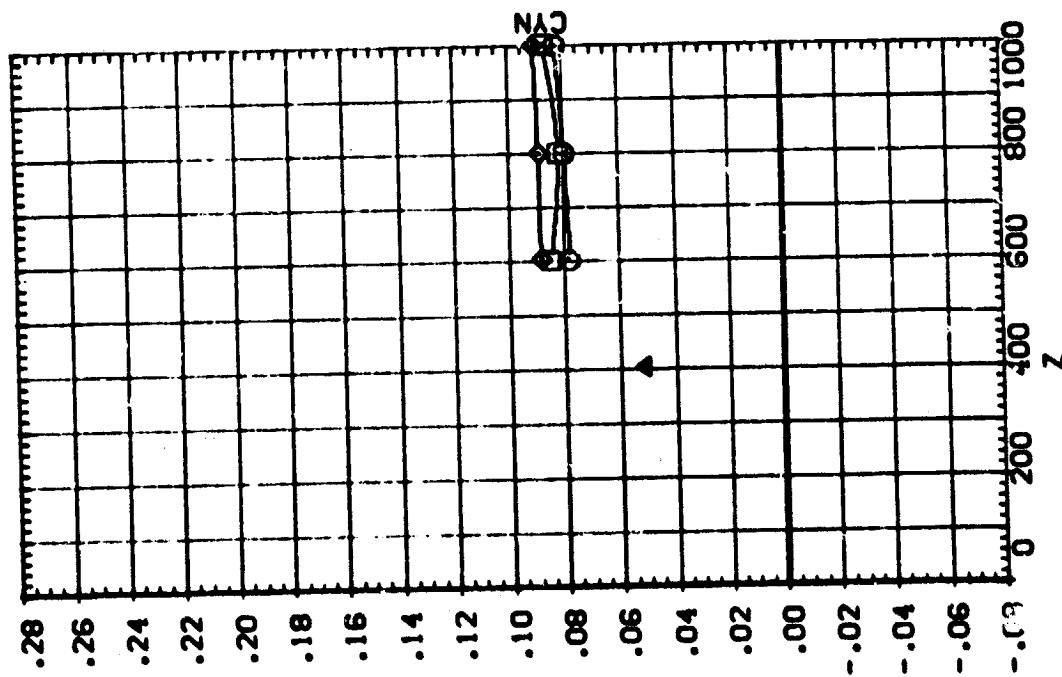
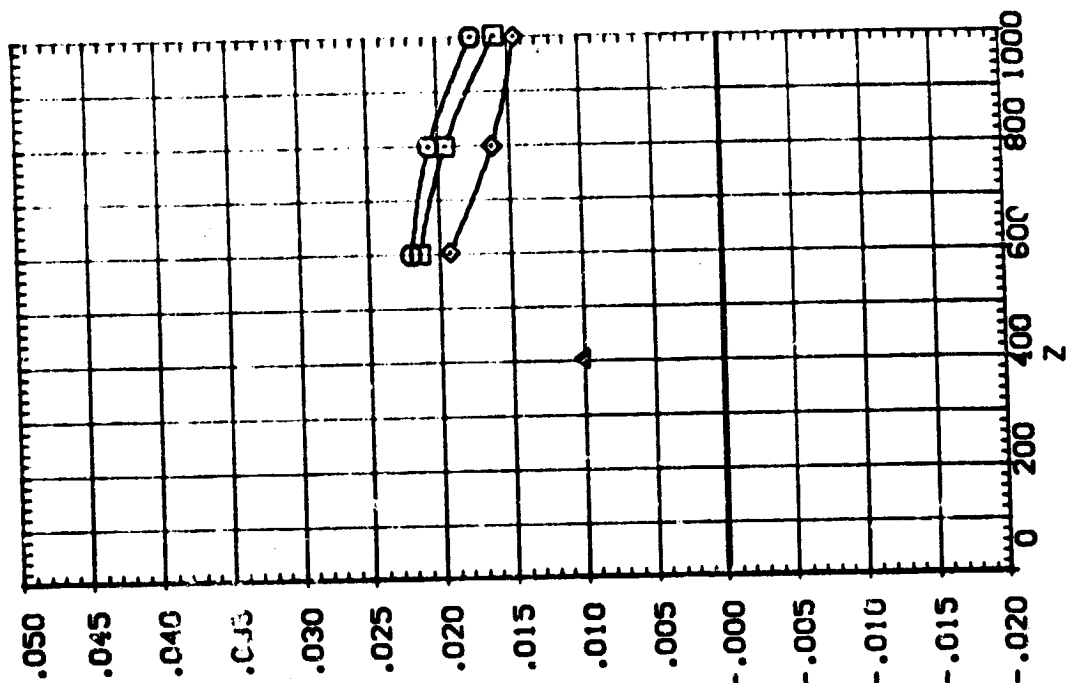
SYMBOL Y .632 MACH 4.510 PTOTL 28.500
 200.550 ALPHA .000 BETA 5.000
 400.080 DALPHA -10.000 DBETA -20.000
 400.440 X .000 PO+PB 1500.000



IA13.SRB(SB)WITH PLUMES SEPARATING FROM 09T10 (RTJ451)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | WACH | PACMETRIC VALUES |
|--------|---------|---------|------------------|
| ○ | .632 | 4.510 | POTIL 28.800 |
| □ | 200.500 | .000 | BETA 5.000 |
| ◇ | 400.080 | -10.000 | DBETA -20.000 |
| △ | 400.440 | .000 | PO+PB 1500.000 |

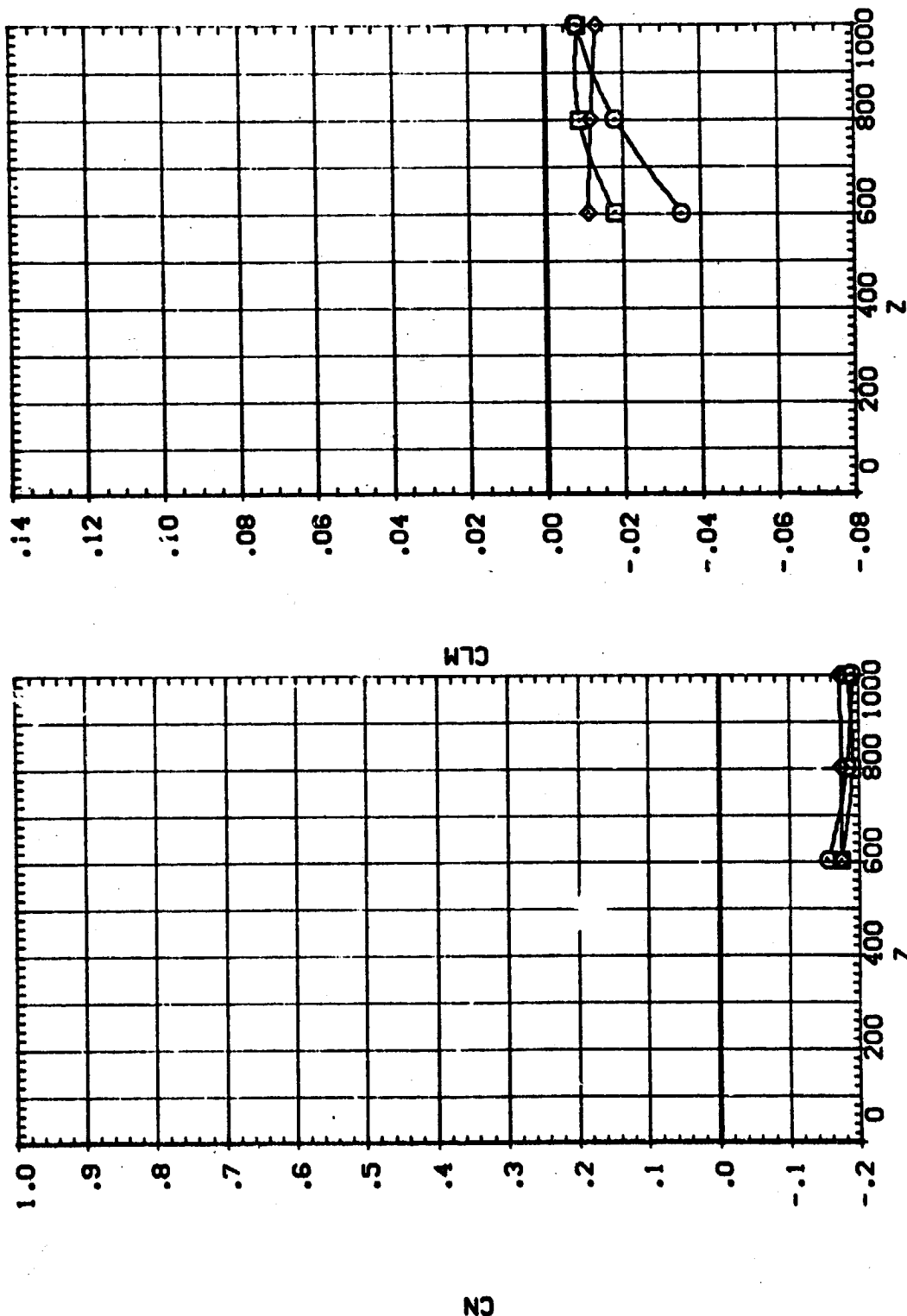


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ452)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.500 | |
| ○ | 200.440 | ALPHA | .000 | BETA | 5.000 | |
| ◇ | 400.210 | DALPHA | -20.000 | DBETA | 5.000 | |
| | | X | .000 | PC-MB | 1500.000 | |

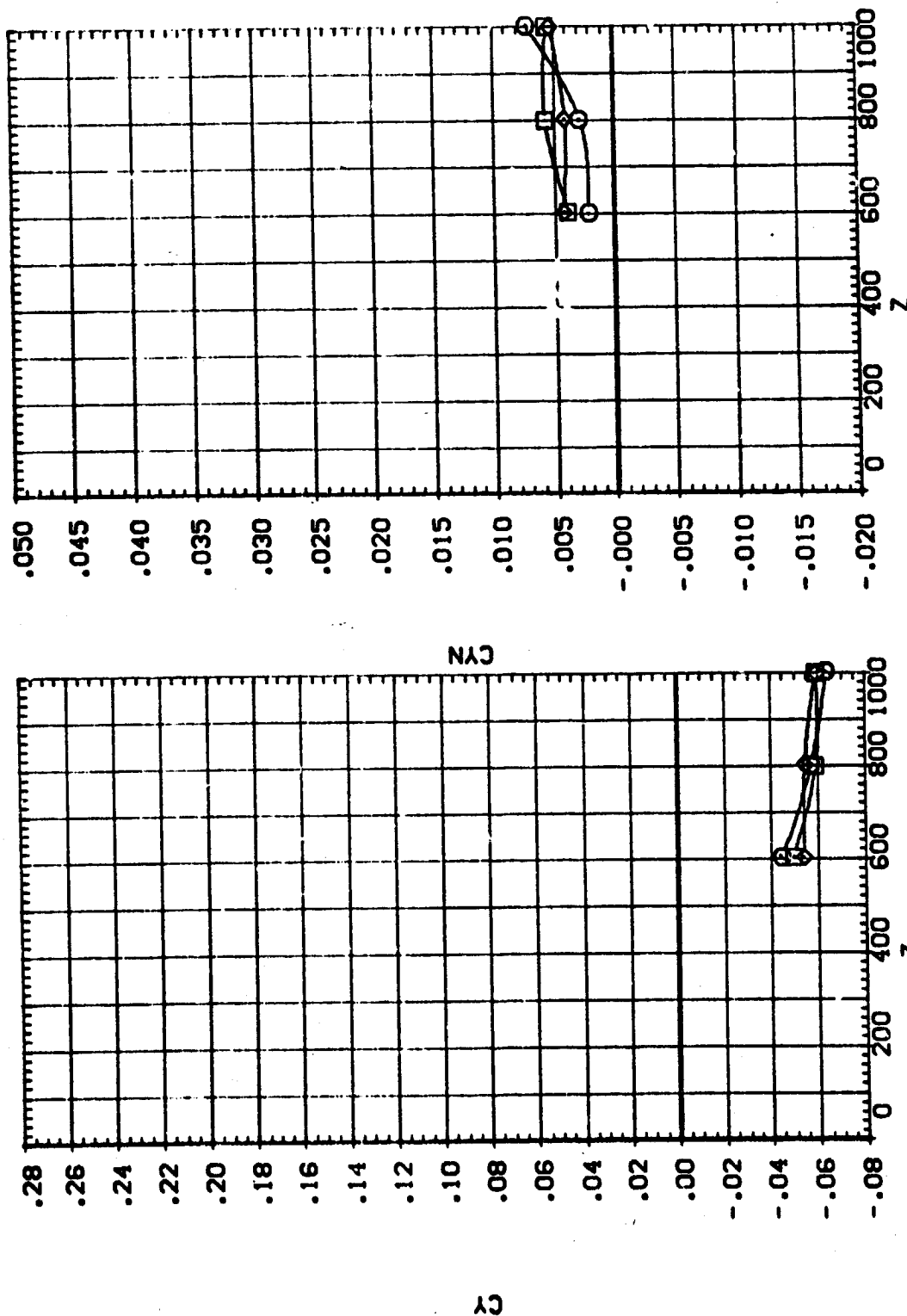


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ452)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|---------|--------|----------|
| | | MACH | 4.510 | PITOTL | 28.900 |
| ○ | 2.053 | ALPHA | .000 | BETA | 5.000 |
| □ | 200.440 | DAUPHA | -20.000 | DBETA | 5.000 |
| ◇ | 400.210 | X | .000 | PC+PB | 1500.000 |

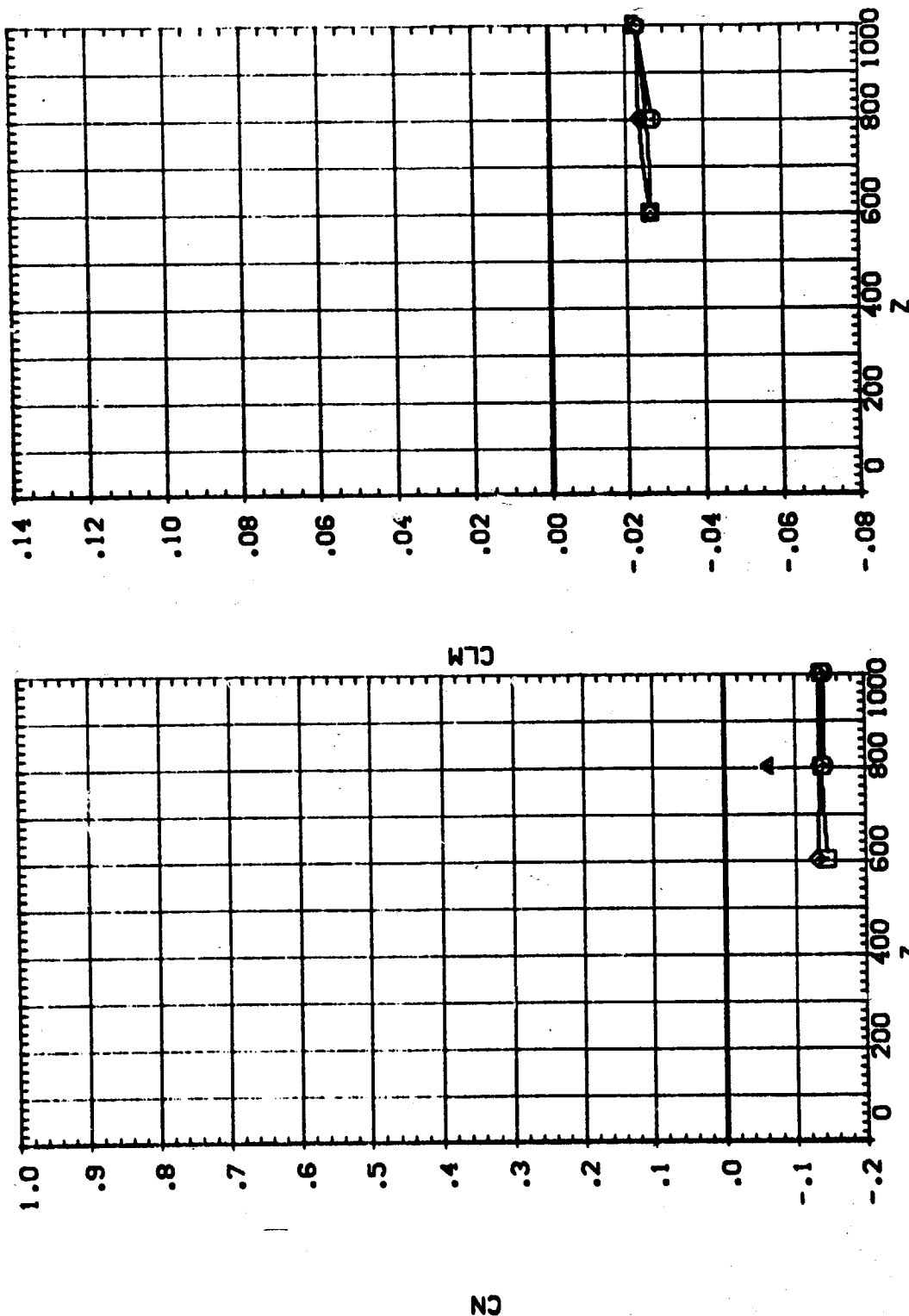


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ453)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|--------|----------|--|
| | | | 4.510 | PITOTL | 28.900 | |
| ○ | 1.743 | ALPHA | .000 | BETA | 5.000 | |
| □ | 199.630 | DALPHA | -20.000 | DBETA | .000 | |
| ◇ | 399.770 | X | .000 | PO+P8 | 1500.000 | |
| △ | 900.520 | | | | | |



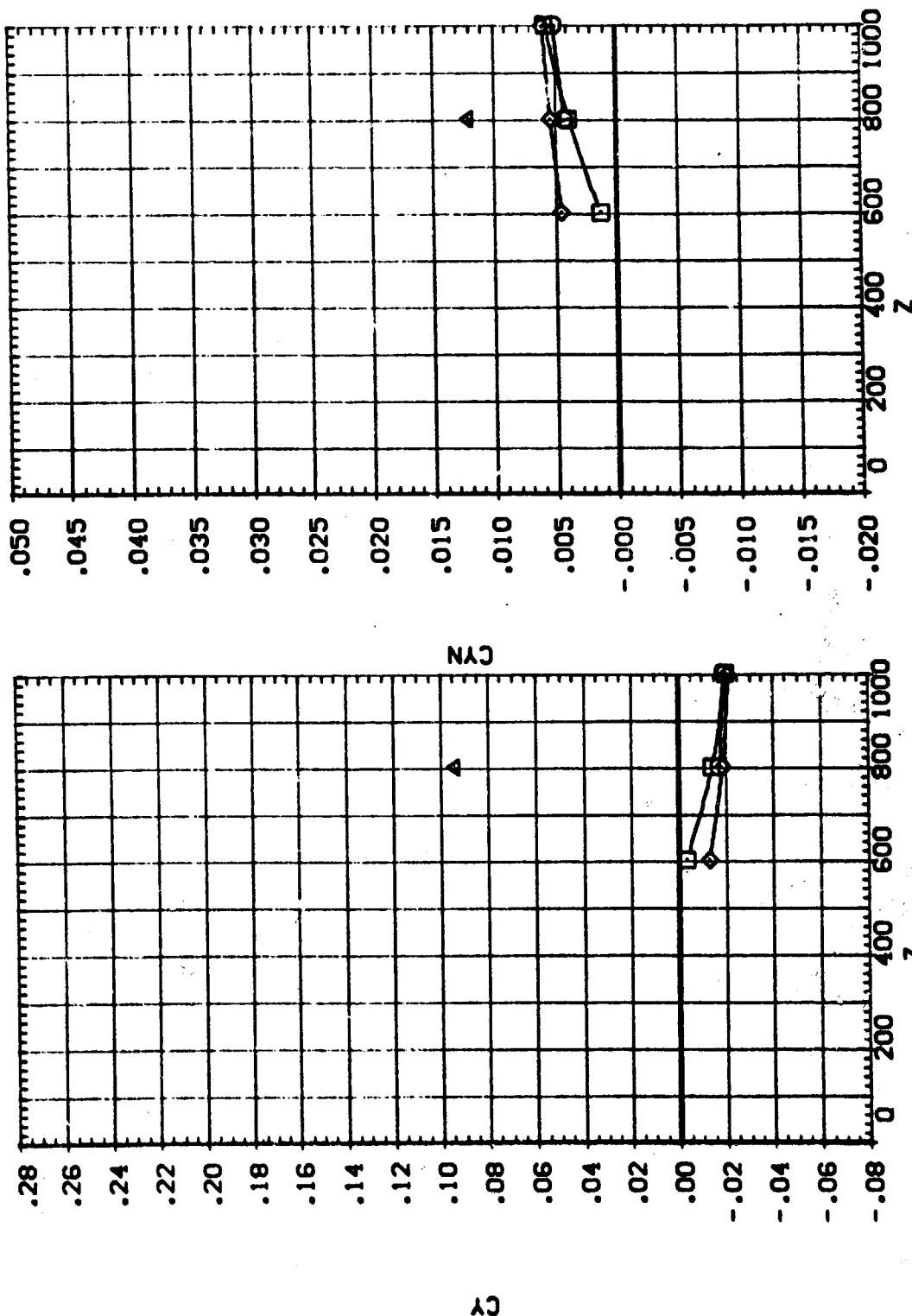
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ453)

SYMBOL Y
 O 1.743
 □ 199.830
 ◇ 399.770
 △ 800.520

PARAMETRIC VALUES
 MACH 4.510
 ALPHA .000
 DIALPHA -20.000
 X .000
 PTOTL 28.900
 BETA 5.000
 DBETA .000
 PC+PB 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



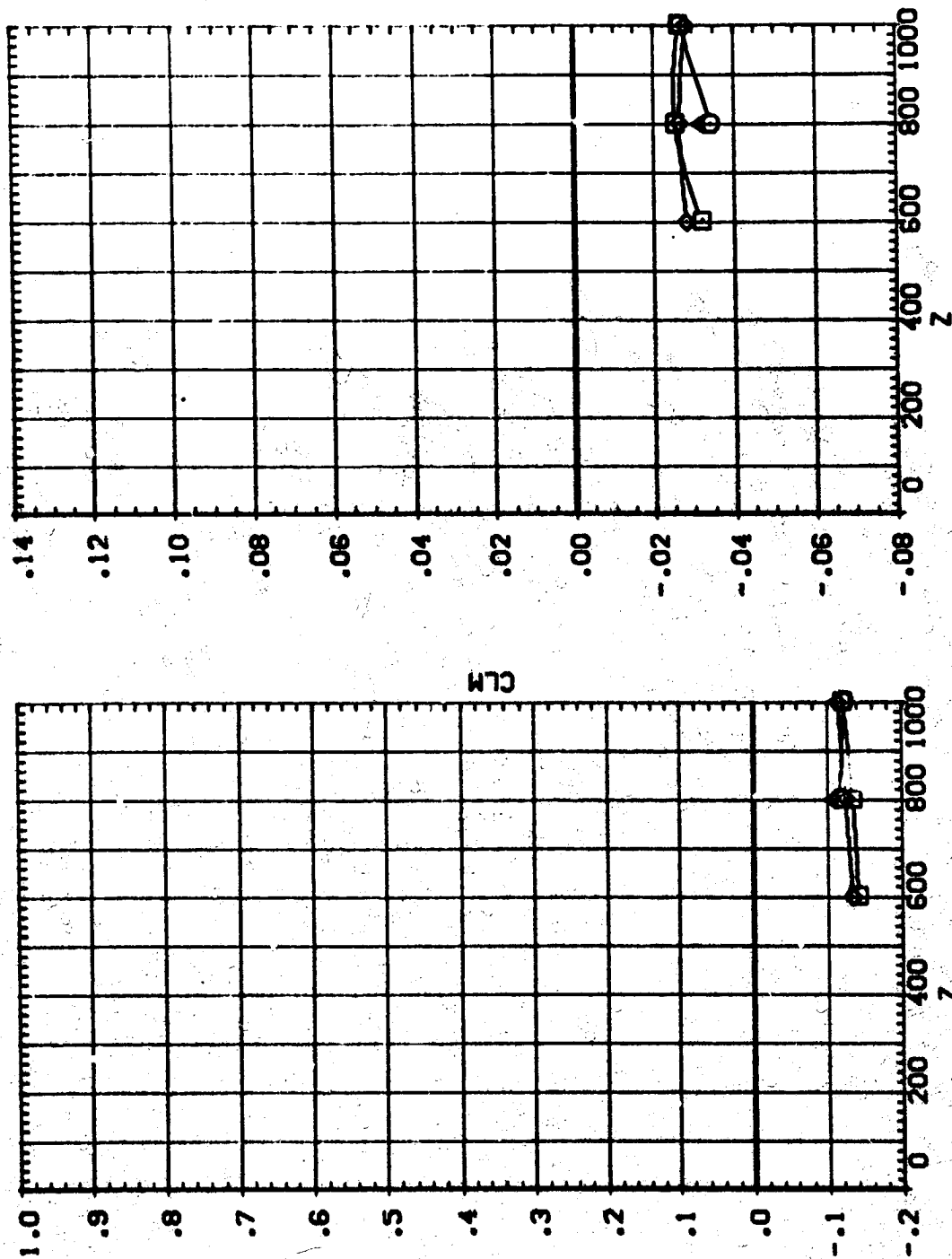
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ454)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 1.745 |
| MACH | 4.510 |
| PTOTL | 28.900 |
| ALPHA | .000 |
| BETA | 5.000 |
| OSBETA | -5.000 |
| PCMB | 1500.000 |
| X | 600.410 |

SYMBOL
 ○ □ ◇ △

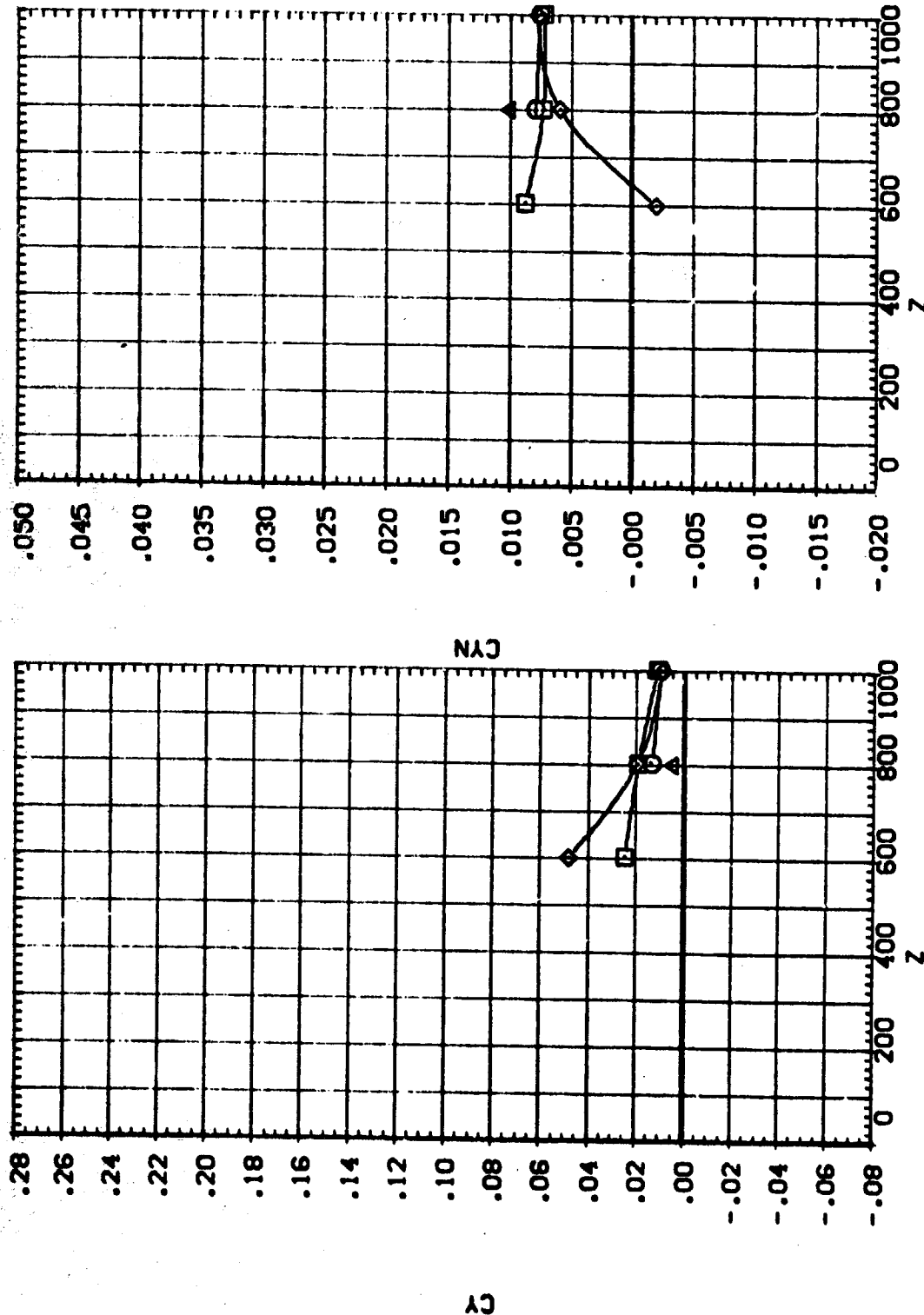


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ454)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL V PARAMETRIC VALUES
 O 1.745 HMOH 28.500
 □ 200.010 ALPHA .000 BETA 5.000
 ◇ 200.380 ALPHA -20.000 DBETA -5.000
 △ 800.410 X .000 PC+PB 1500.000

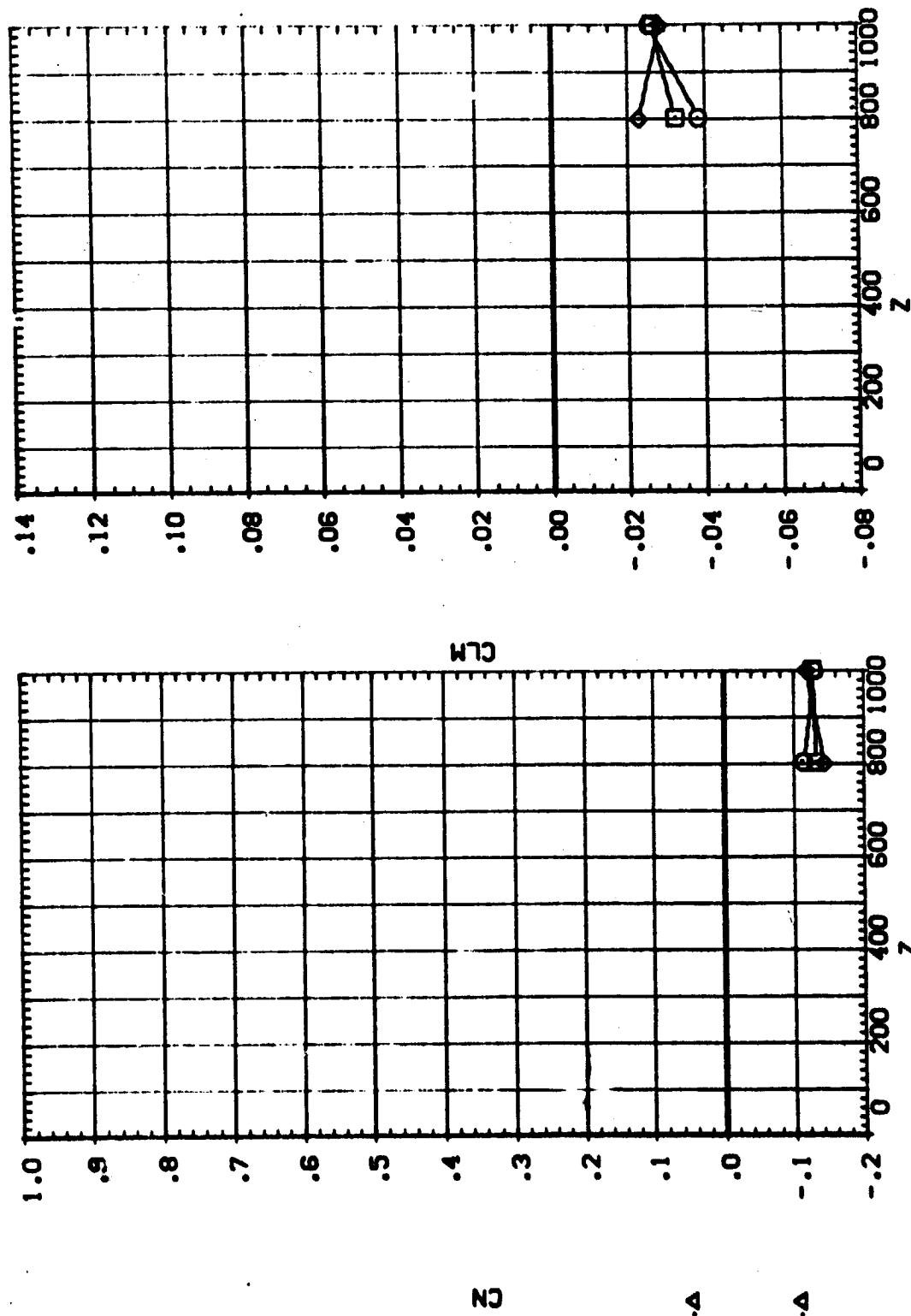


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ455)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | HACH | PARAMETRIC VALUES | 20.900 |
|--------|---------|-------|-------------------|----------|
| □ | 203.130 | ALPHA | 4.510 | POTL |
| ◇ | 401.510 | BETA | .000 | BETA |
| △ | 800.120 | PO48 | -20.000 | PO48 |
| | | X | .000 | 1500.000 |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ455)

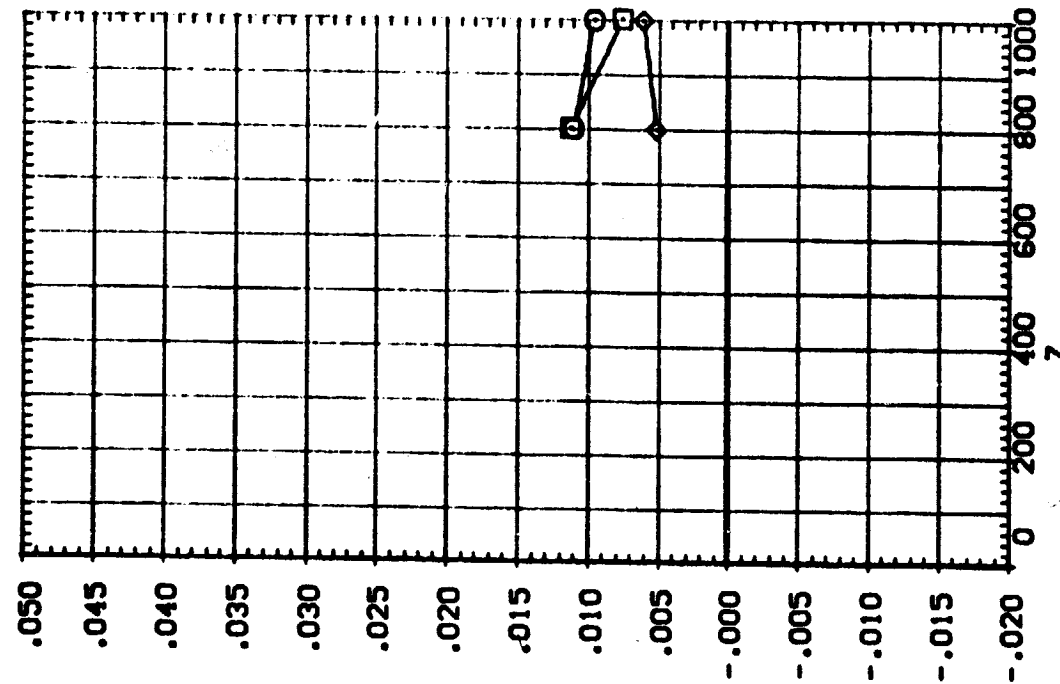
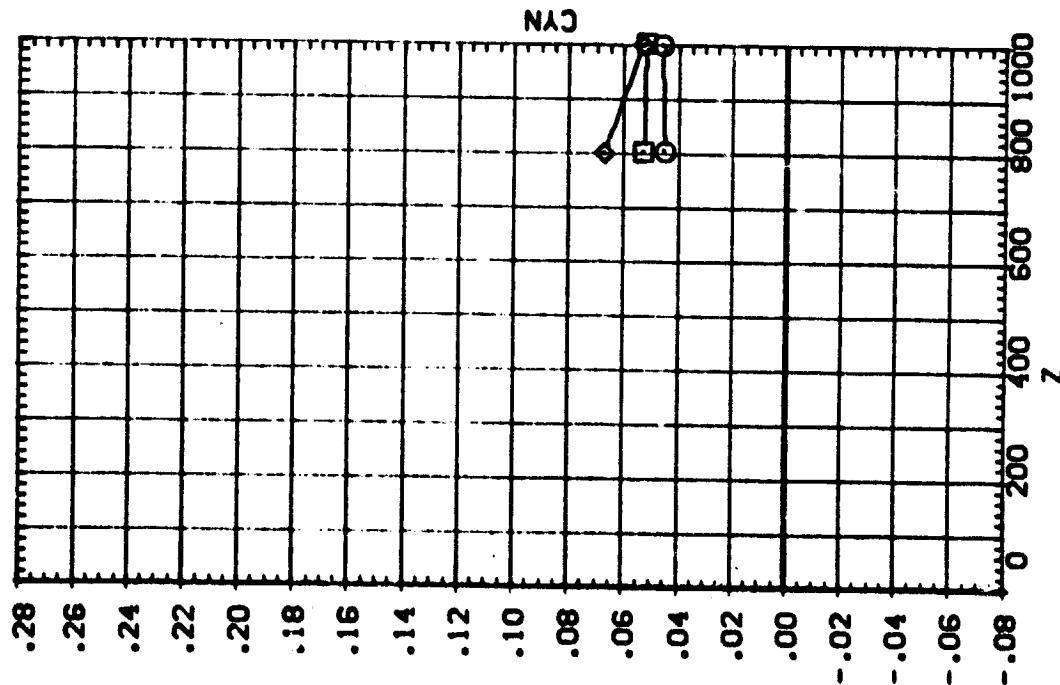
SYMBOL

Y

PARAMETRIC VALUES

| | WCH | PTOTL | BETA | PO+P8 |
|---------|-------|---------|------|----------|
| 203.130 | .448 | 4.510 | .000 | 28.800 |
| 401.510 | ALPHA | -20.000 | .000 | 5.000 |
| 800.120 | X | .000 | .000 | -10.000 |
| | | | | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

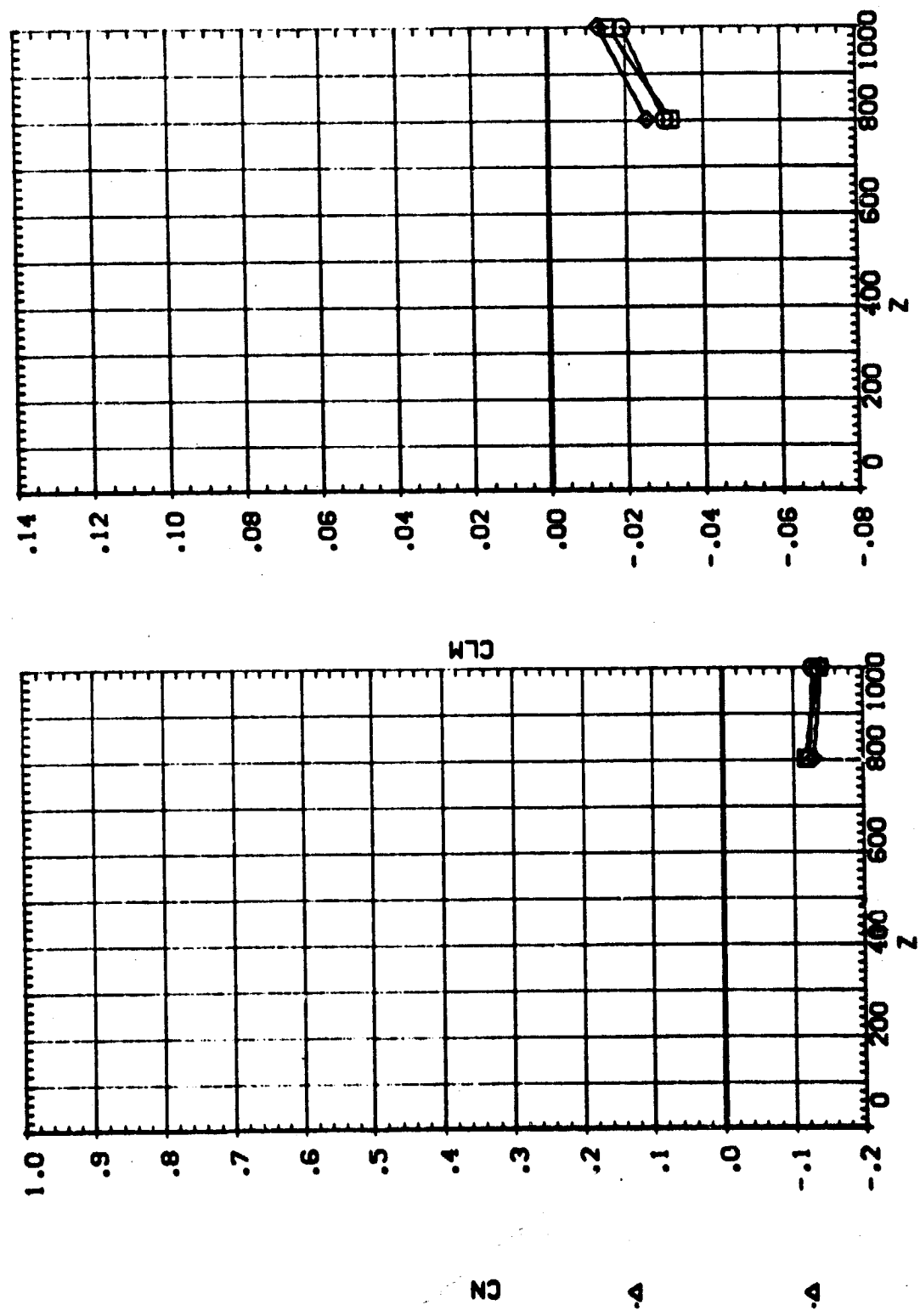


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ456)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | |
|--------|---------|-------------------|---------------|
| □ | 1.442 | 4.510 | PTOTL 28.900 |
| ◇ | 200.500 | .000 | BETA 5.000 |
| △ | 403.800 | -20.000 | DBETA -20.000 |
| | 800.420 | .000 | PO+9 1500.000 |
| | | X | - |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM SRB/ET

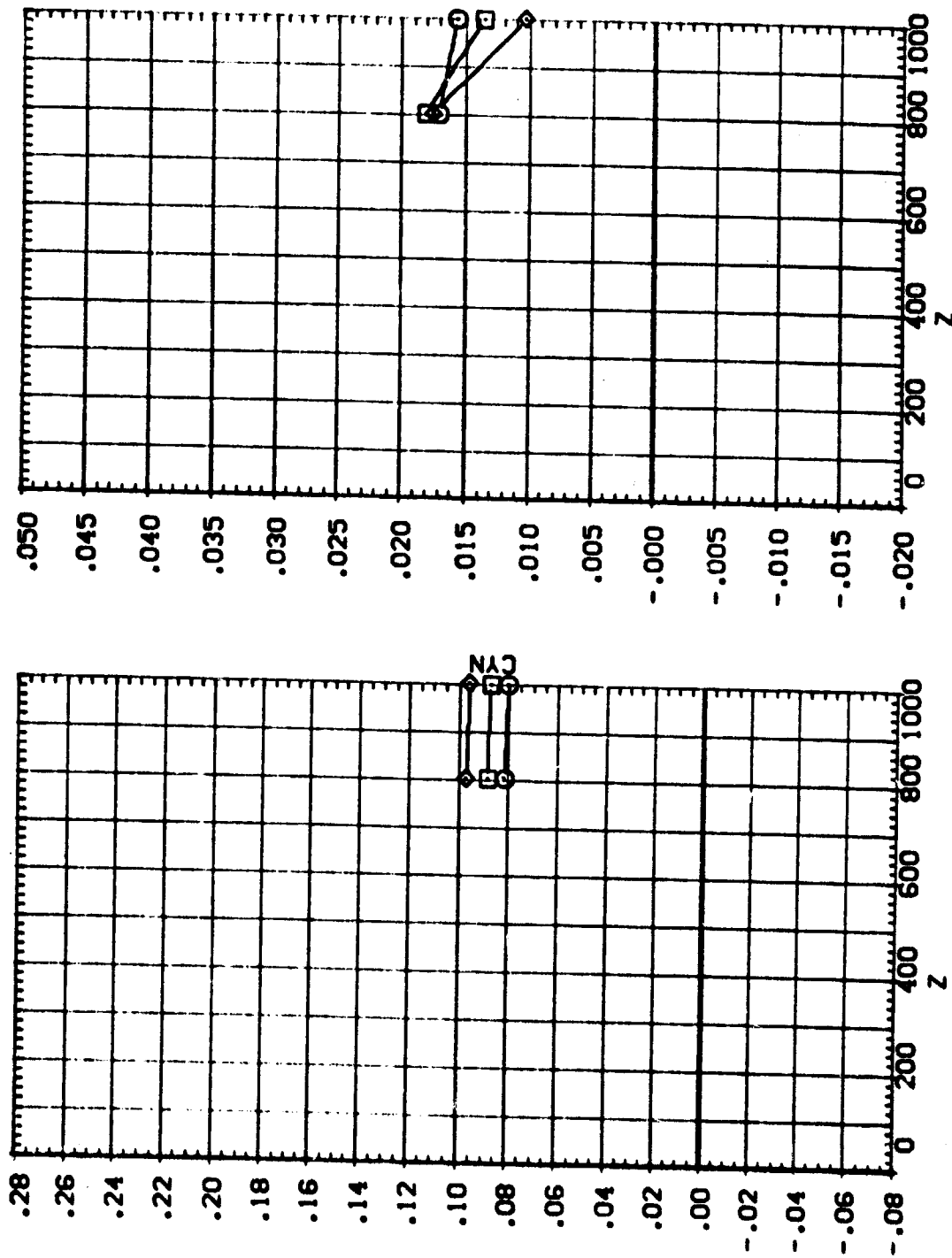
IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ456)

SYMBOL

Y
1.442
200.500
403.800
800.420

PARAMETRIC VALUES
MACH 4.510
ALPHA .000
DALPHA -20.000
X .000
PO+8 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

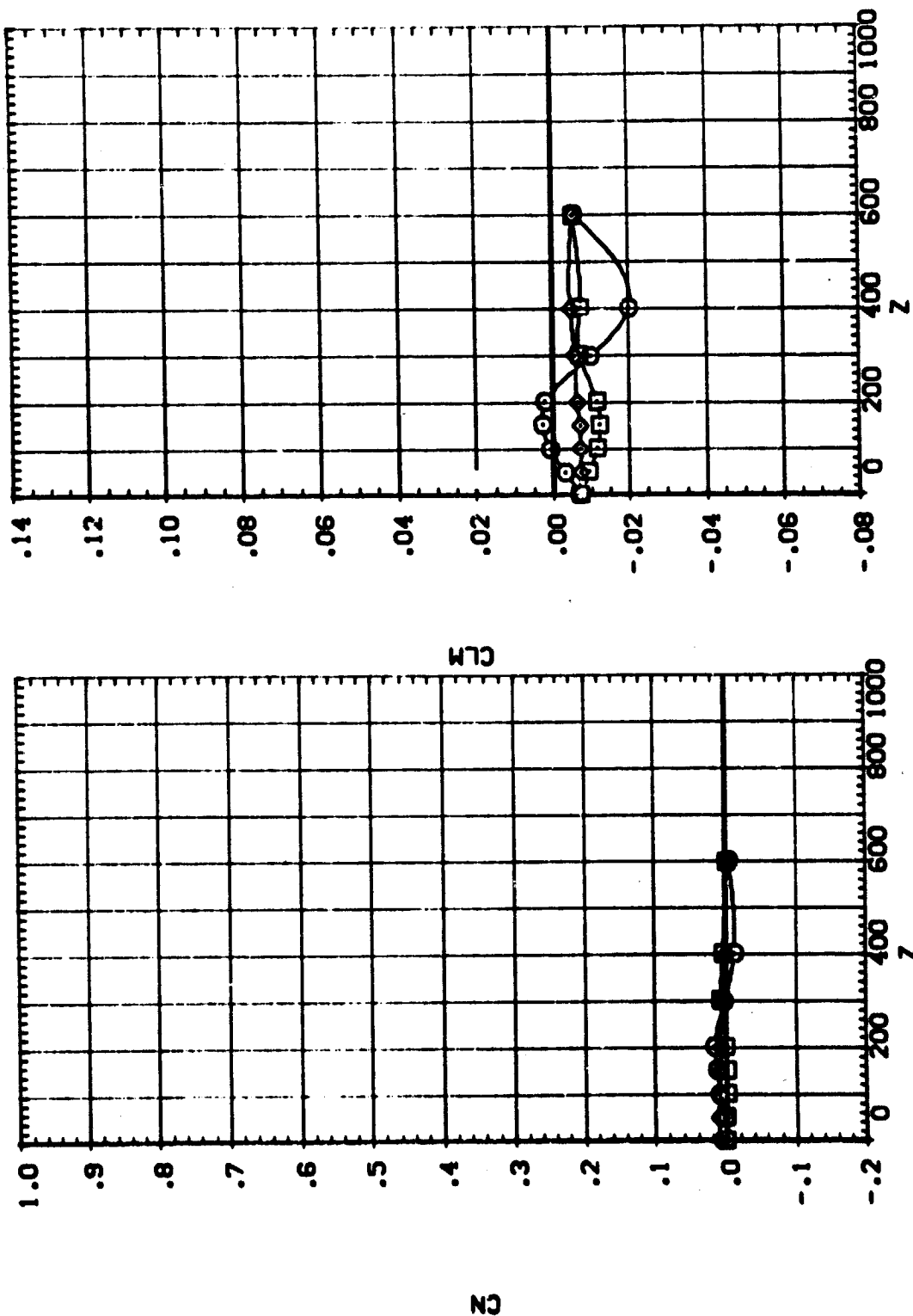


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ459)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| | | | | | | |
|--------|---|-------------------|--------|-------|----------|--------|
| SYMBOL | Y | PARAMETRIC VALUES | | | | |
| | | WACH | 4.510 | PTOTL | 28.300 | |
| | | 203.350 | ALPHA | .000 | BETA | -5.000 |
| | | 400.180 | DALPHA | 5.000 | DBETA | 5.000 |
| | | X | .000 | POW8 | 1500.000 | |



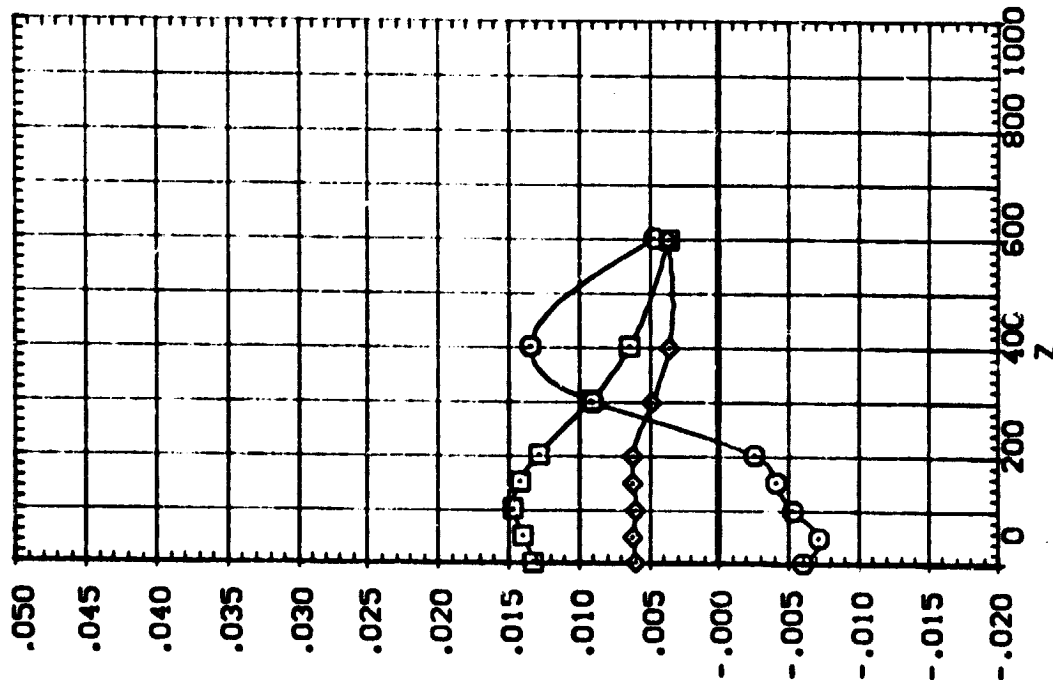
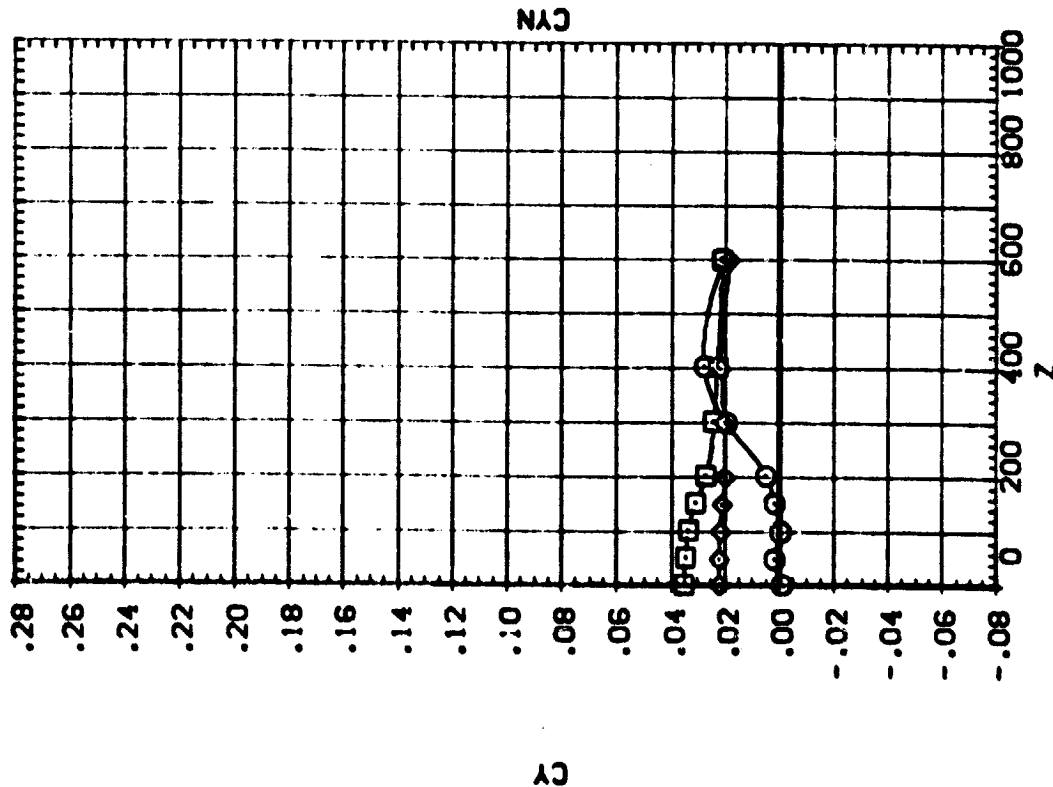
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM SRB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09110 (RIJ459)

SYMBOL
 ○
 □
 ◇

PARAMETRIC VALUES
 .119 MACH 28.900
 273.350 ALPHA .000 BETA -5.000
 410.160 DAPHA 5.000
 X PD-48 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

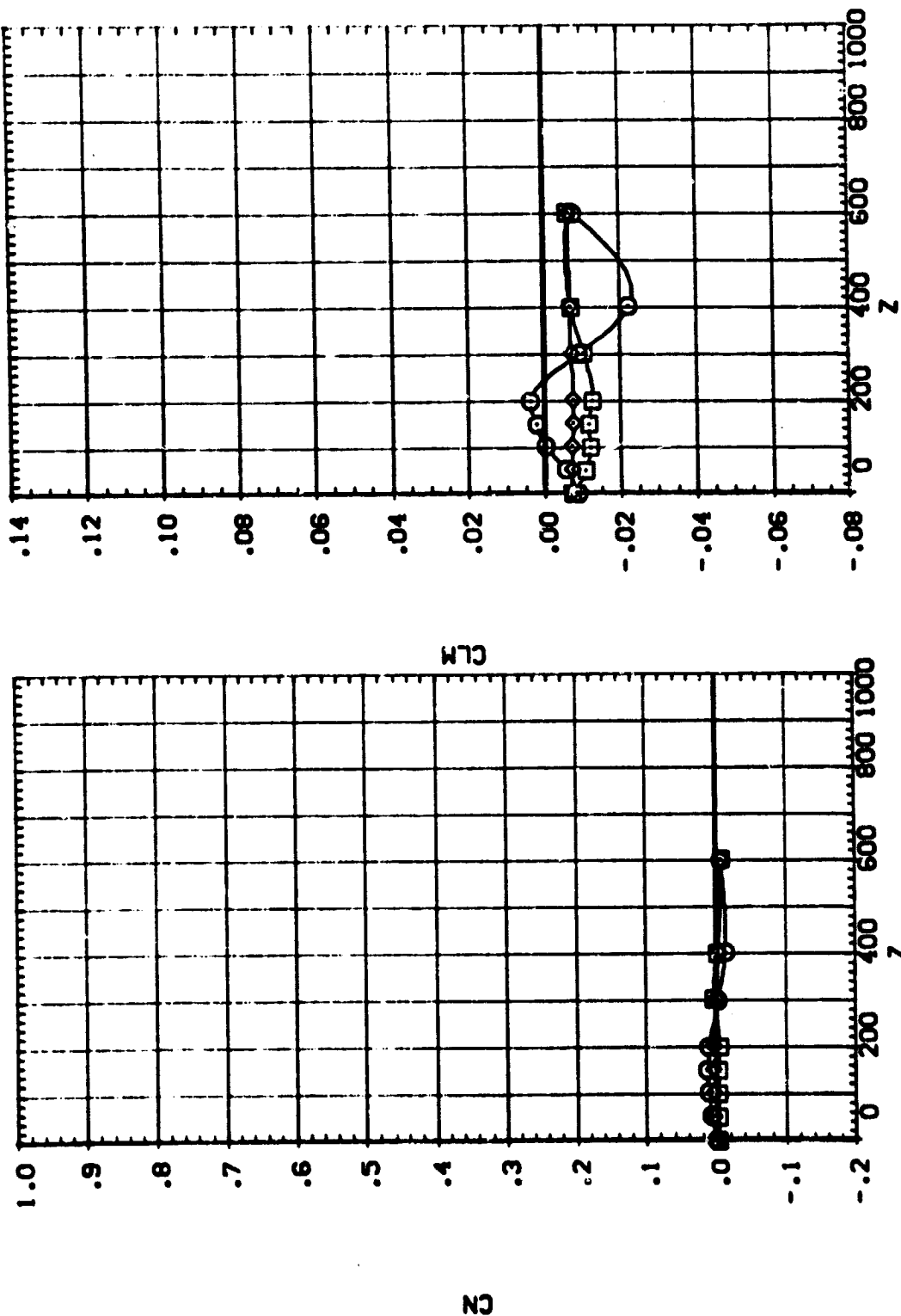


SRB V/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SR8(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ460)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | PC-48 | PC-49 |
|--------|---------|-------|-------------------|-------|----------|
| ○ | 200.660 | 4.371 | 4.510 | PTOTL | 28.900 |
| □ | 403.310 | 5.000 | .000 | BETA | -5.000 |
| ◇ | | | 5.000 | DBETA | .000 |
| | | | .000 | PC-48 | 1500.000 |

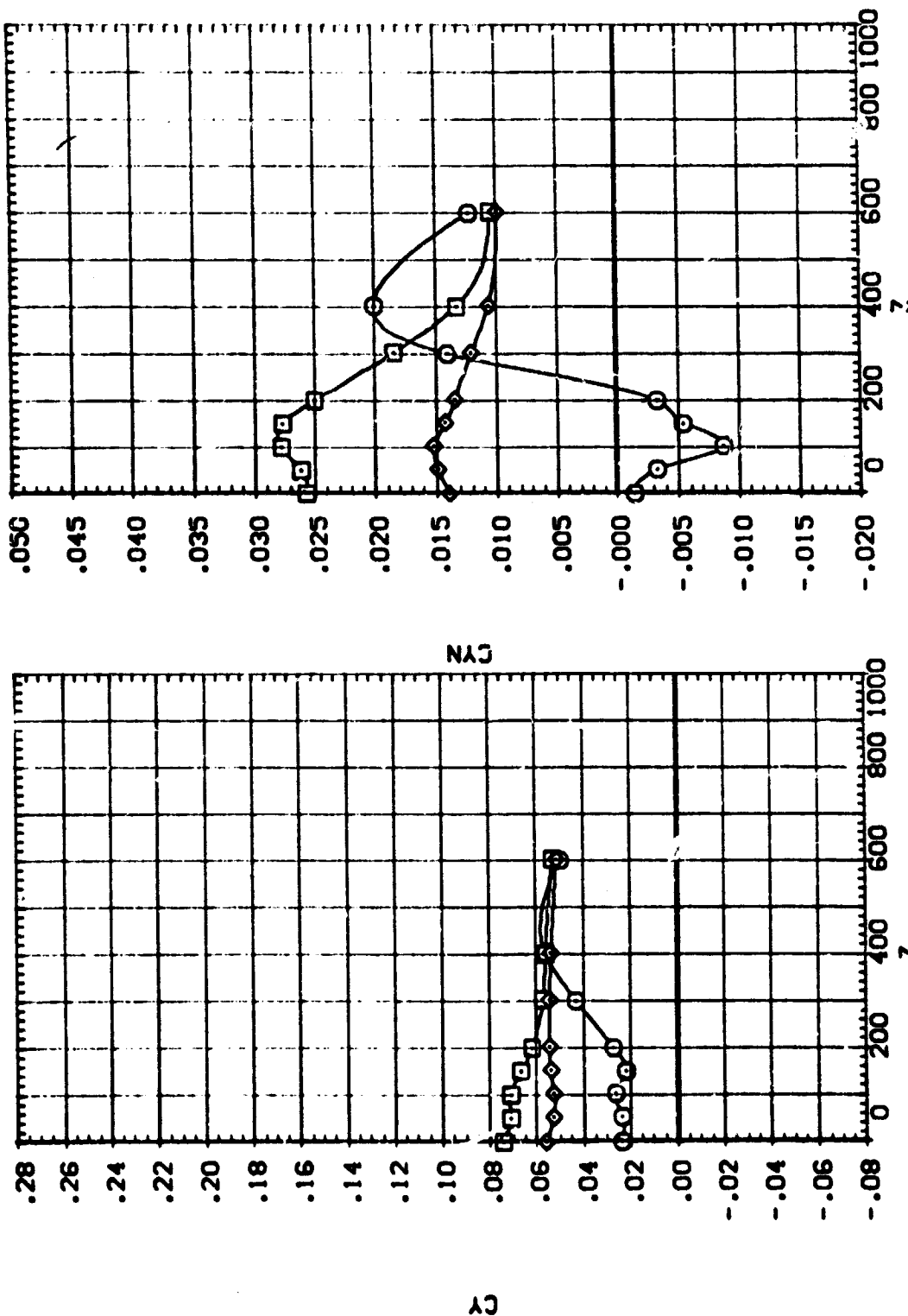


SR8 W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ460)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL Y MACH ALPHA X
 ○ -0.371 4.510 0.000 20.900
 □ 200.860 .000 BETA -5.000
 ◇ 403.310 5.000 OBETA .000
 x .000 PC-#8 1500.000



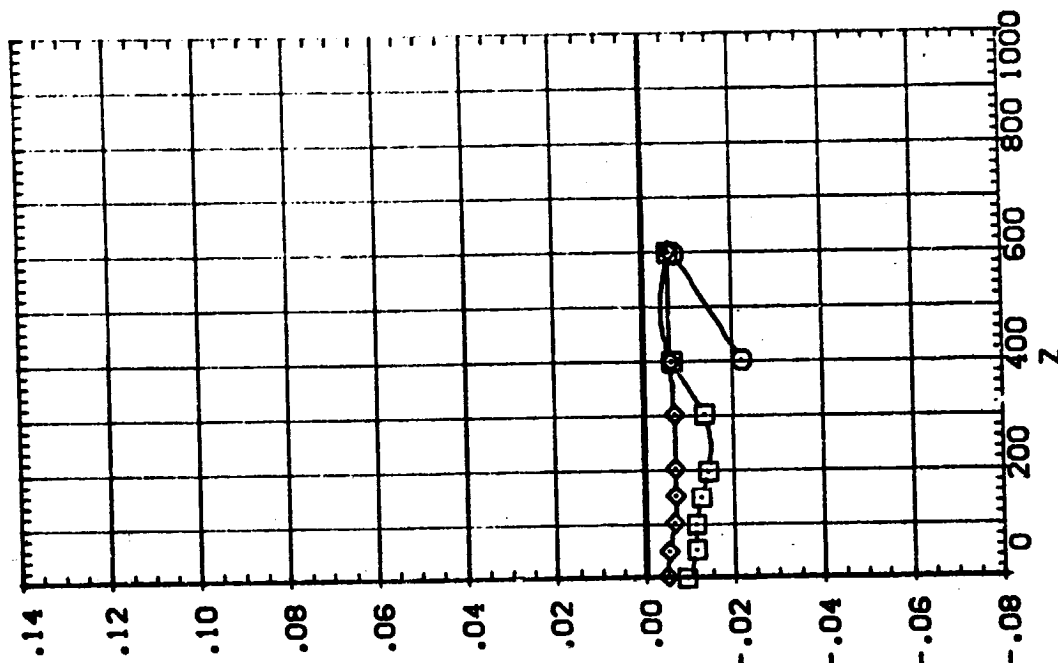
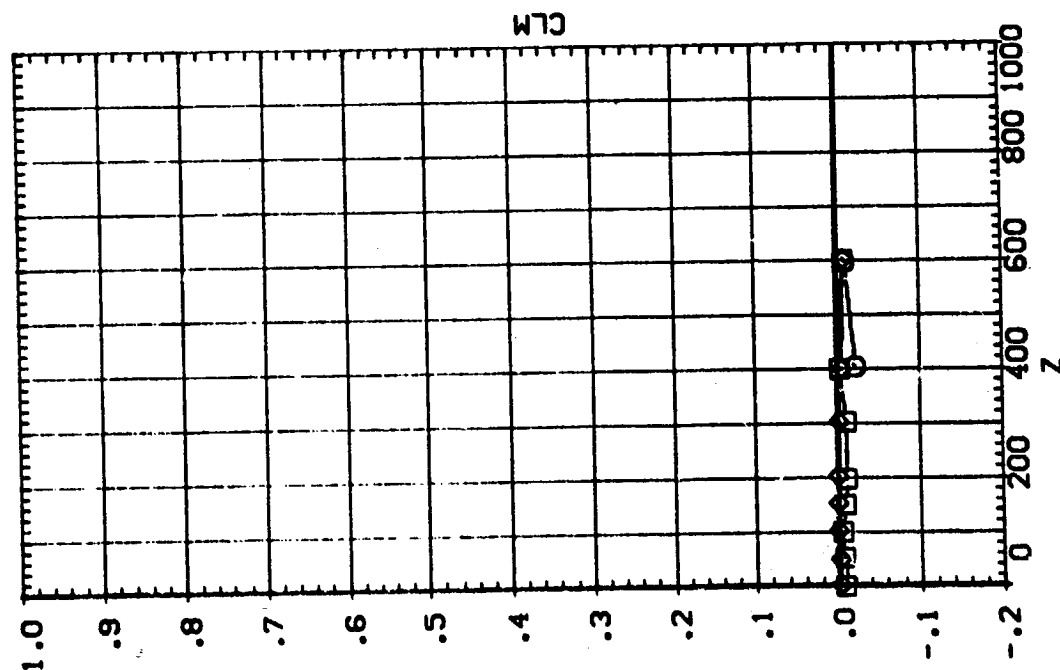
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

7084.5

PARAMETRIC VALUES

| | | | | |
|----------|-------|-------|--------|---------|
| 28.900 | PTOTL | 4.510 | MACH | .641 |
| -5.000 | BETA | .000 | ALPHA | 200.130 |
| -5.000 | DBETA | 5.000 | DALPHA | 400.170 |
| 1500.000 | PCMB | .000 | X | |

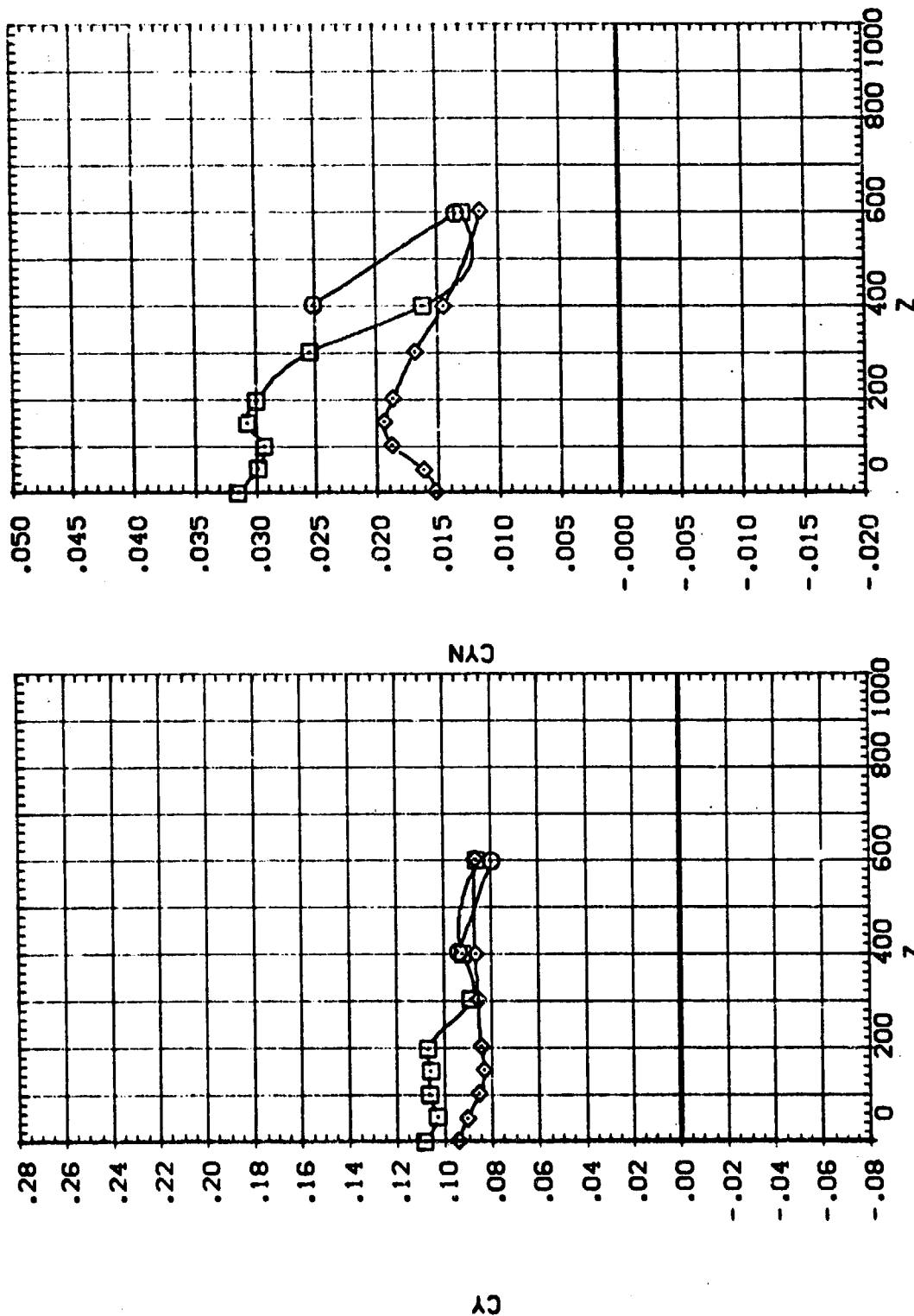
SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ461)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | |
|--------|---------|-------------------|----------|
| ○ | .641 | MACH | 28.900 |
| □ | 200.130 | ALPHA | .000 |
| ◇ | 400.170 | DALPHA | 5.000 |
| | | BETA | -5.000 |
| | | DBETA | -5.000 |
| | | PC-M8 | 1500.000 |

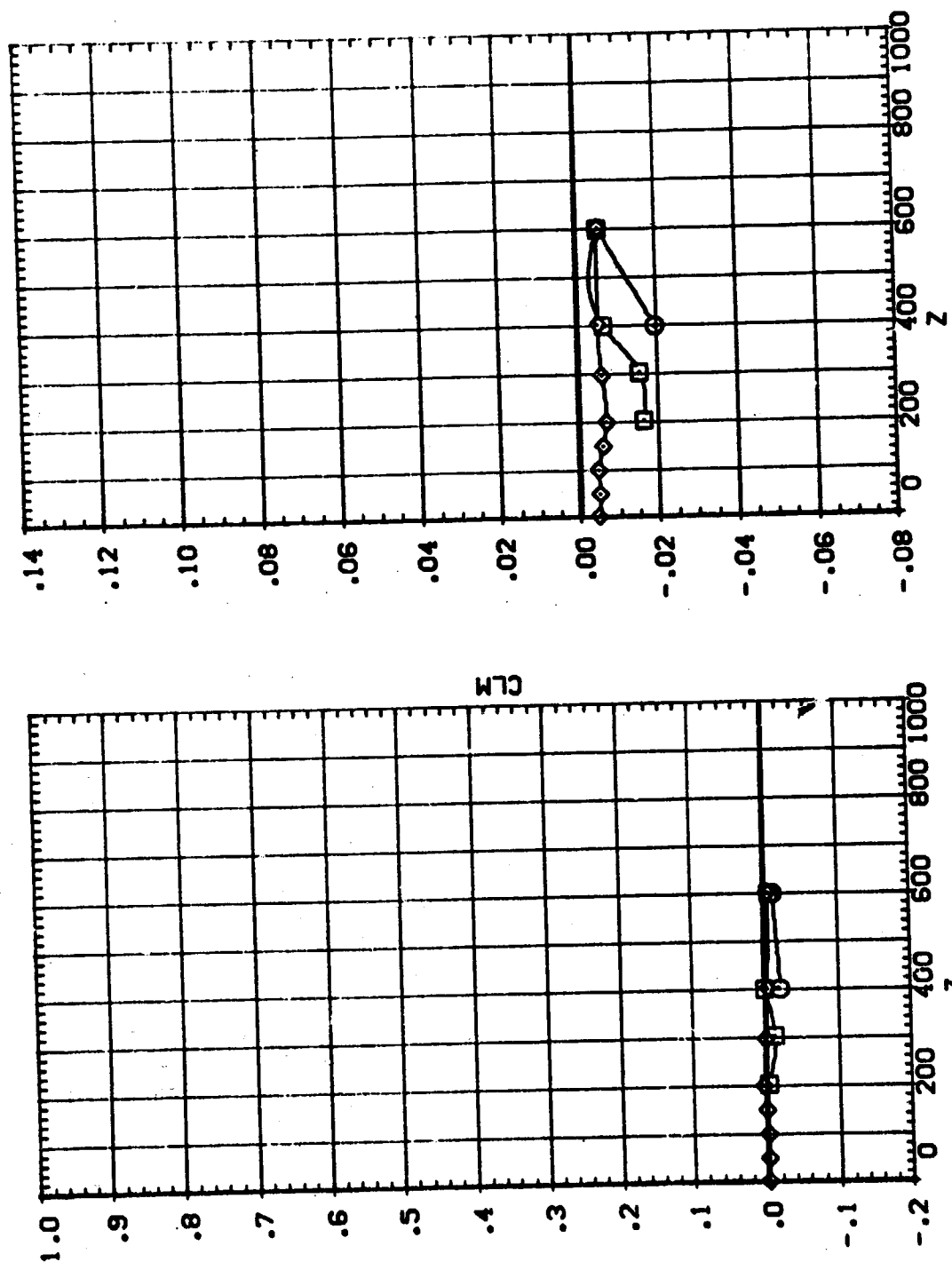


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ462)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

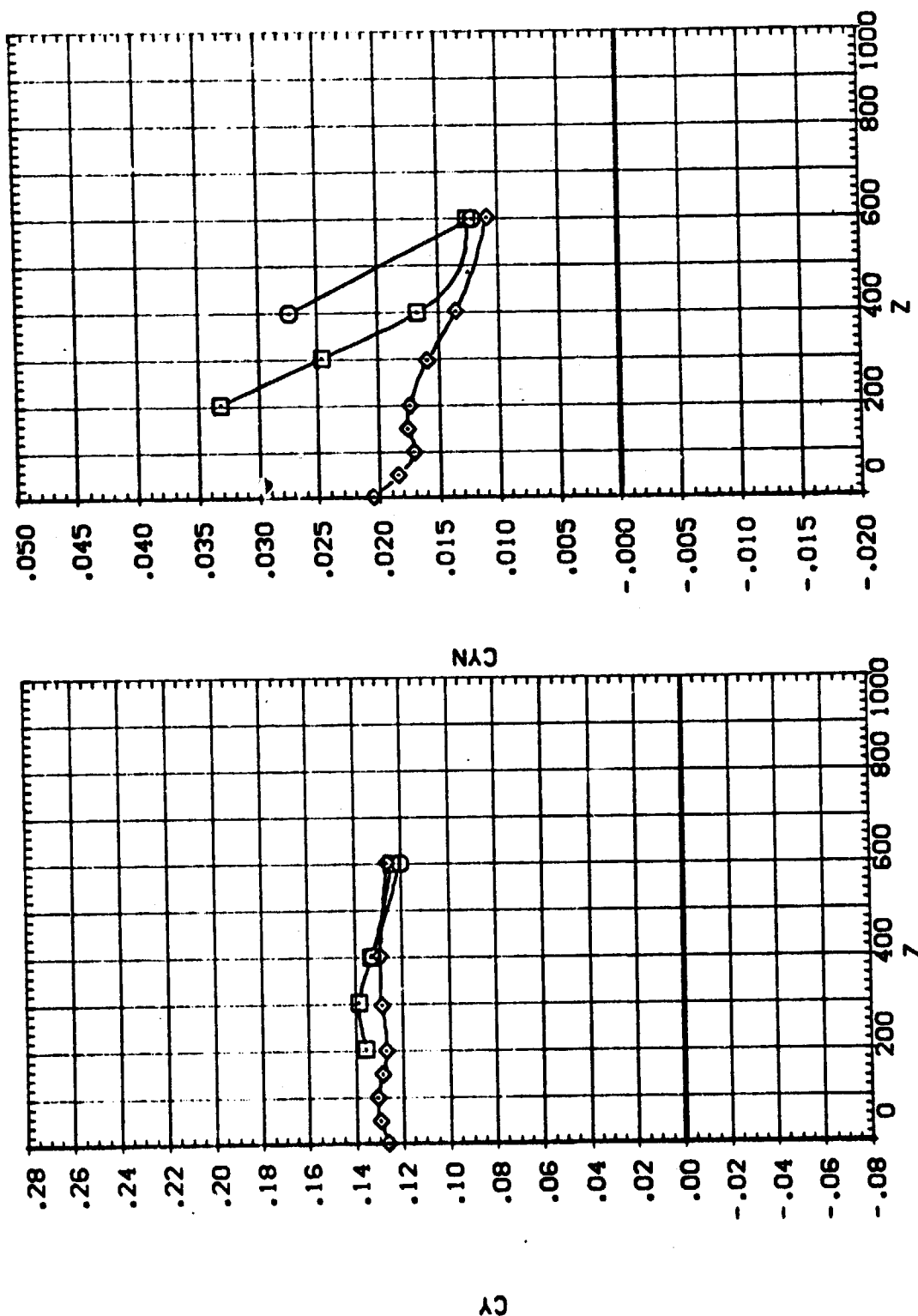
| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|--------|-------|----------|
| | Y | MACH | 4.510 | PTOTL |
| ○ | 3.036 | ALPHA | 5.000 | BETA |
| □ | 200.490 | DALPHA | 5.000 | OBETA |
| ◇ | 399.140 | X | .000 | PC+8 |
| | | | | 1500.000 |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SYMBOL \square \diamond

| PARAMETRIC VALUES | |
|-------------------|----------|
| γ | 3.036 |
| MACH | 4.510 |
| PTOTL | 28.900 |
| ALPHA | .000 |
| BETA | -5.000 |
| DBETA | -10.000 |
| PC48 | 1500.000 |
| X | .000 |

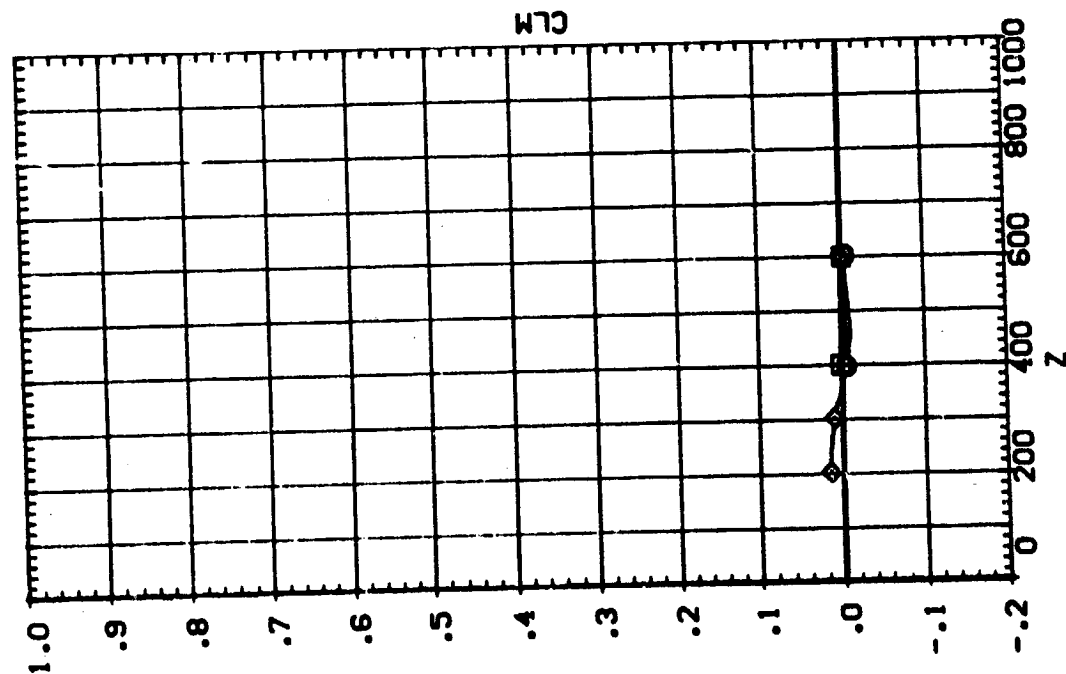
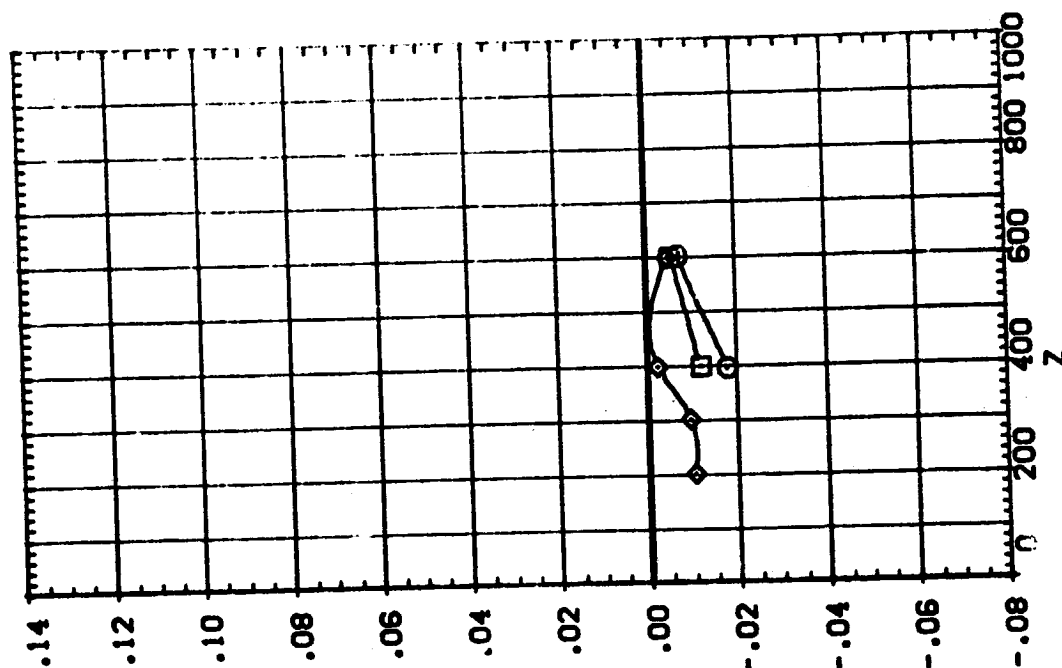


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ463)

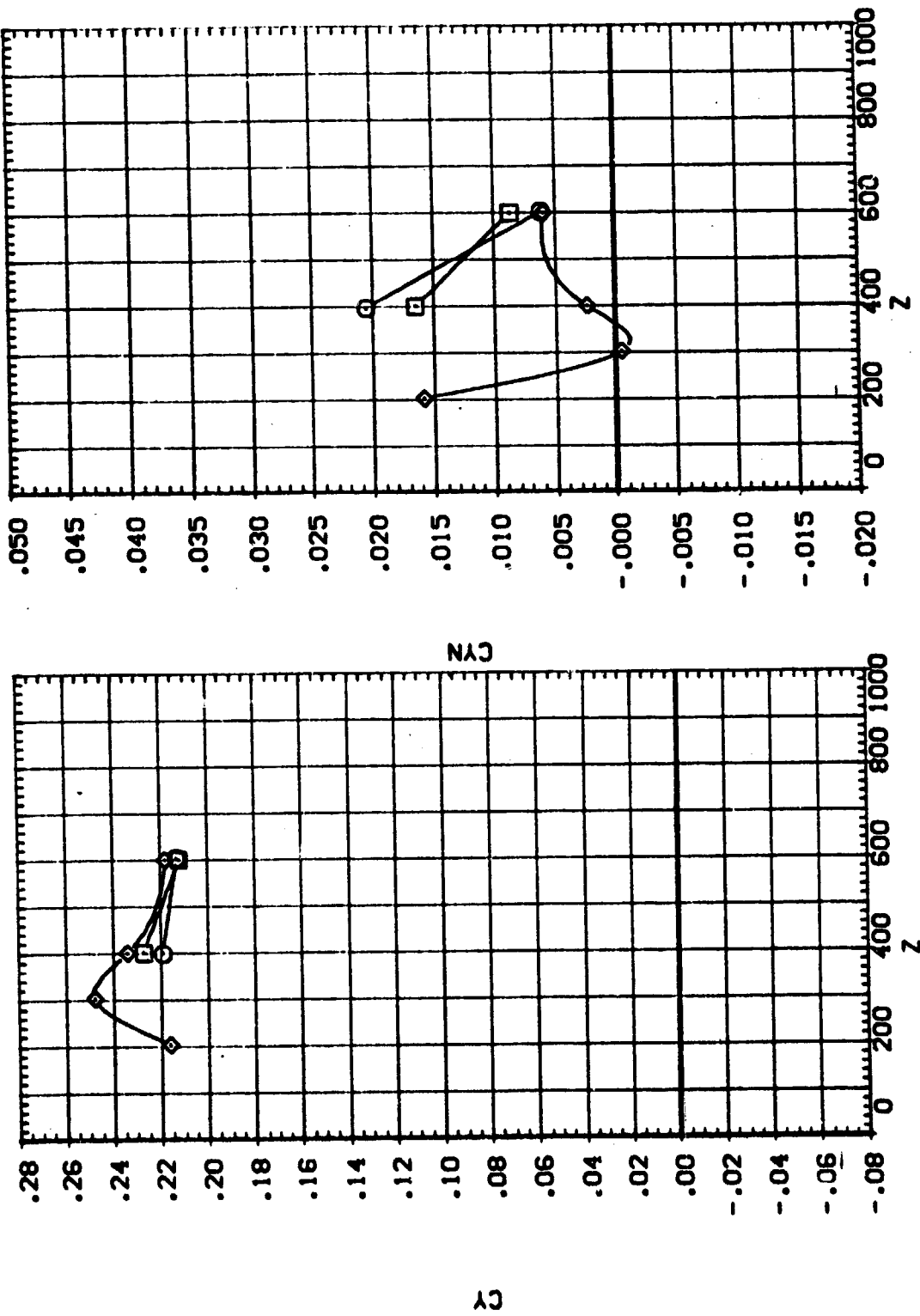
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|---------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| ○ | 200.420 | ALPHA | .000 | BETA | -5.000 | |
| □ | 400.980 | DAUPHA | 5.000 | DBETA | -20.000 | |
| ◇ | | X | .000 | PC+98 | 150.000 | |



SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|-------|-------------------|
| ○ | .083 | ALPHA | 4.510 |
| □ | 200.420 | BETA | 5.000 |
| ◇ | 400.980 | DBETA | 5.000 |
| | | PC+PB | 1500.000 |

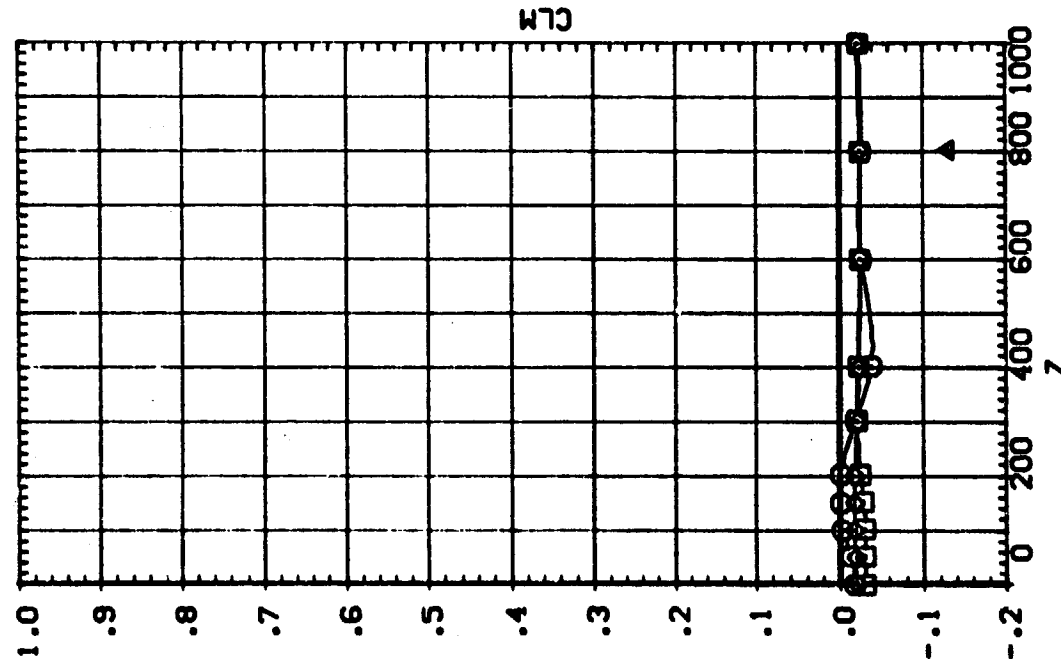
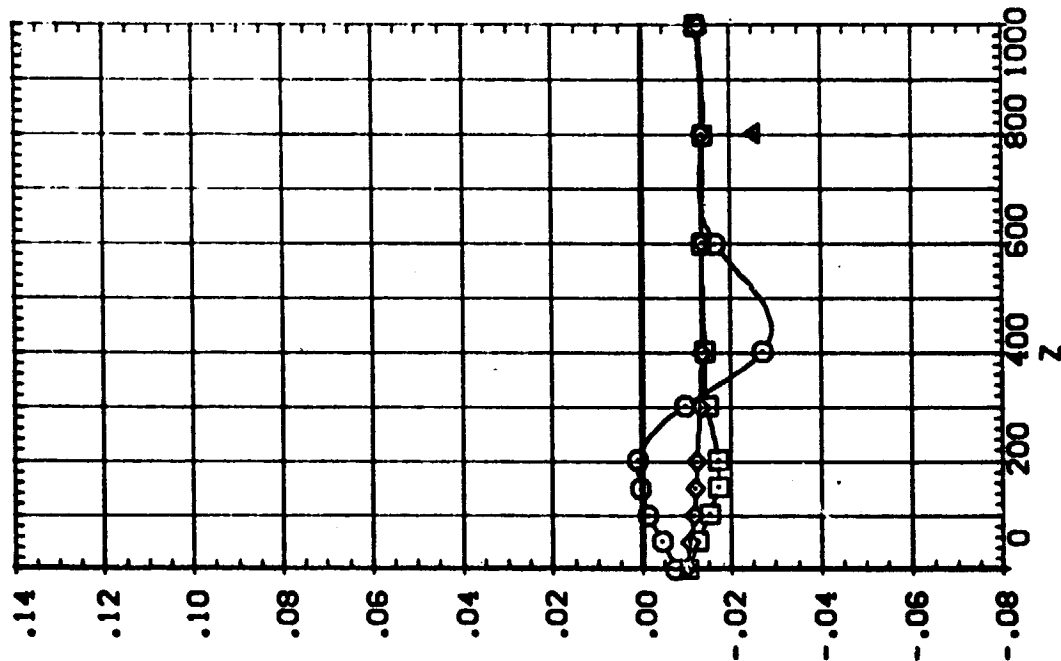


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ464)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL Y MACH PARAMETRIC VALUES
 O -170 4.510 PTOTL 28.900
 □ 200.450 ALPHA .000 BETA -5.000
 ◇ 400.380 DAPHA .000 DBETA 5.000
 △ 800.000 X PCMB 1500.000

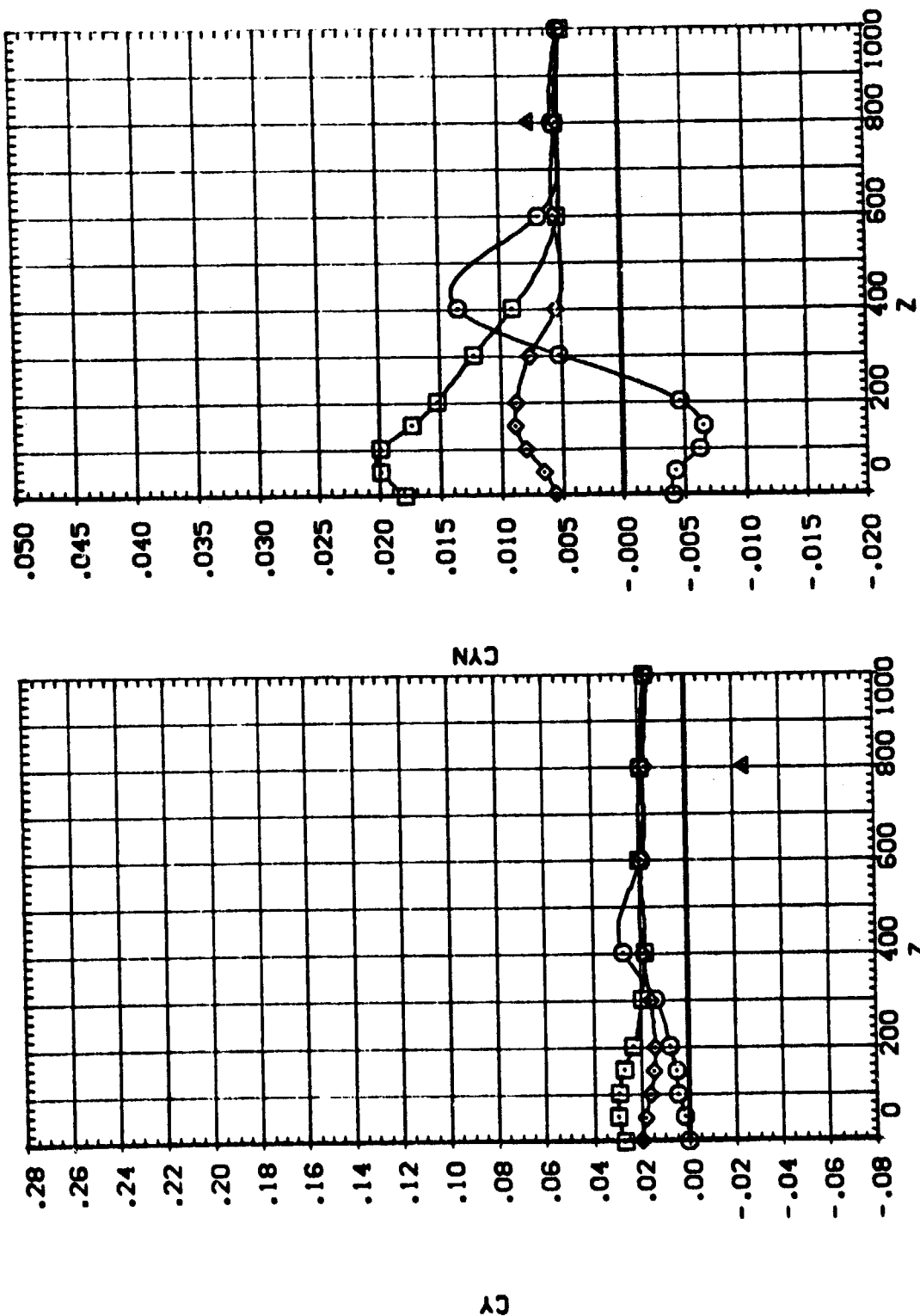


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ464)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|--------|----------|
| | | MACH | PTOTL | BETA | PO+P8 |
| ○ | -1.170 | 4.510 | 28.900 | -5.000 | |
| □ | 200.450 | .000 | .000 | .000 | 5.000 |
| ◇ | 400.380 | .000 | .000 | .000 | 1500.000 |
| △ | 600.000 | X | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ465)

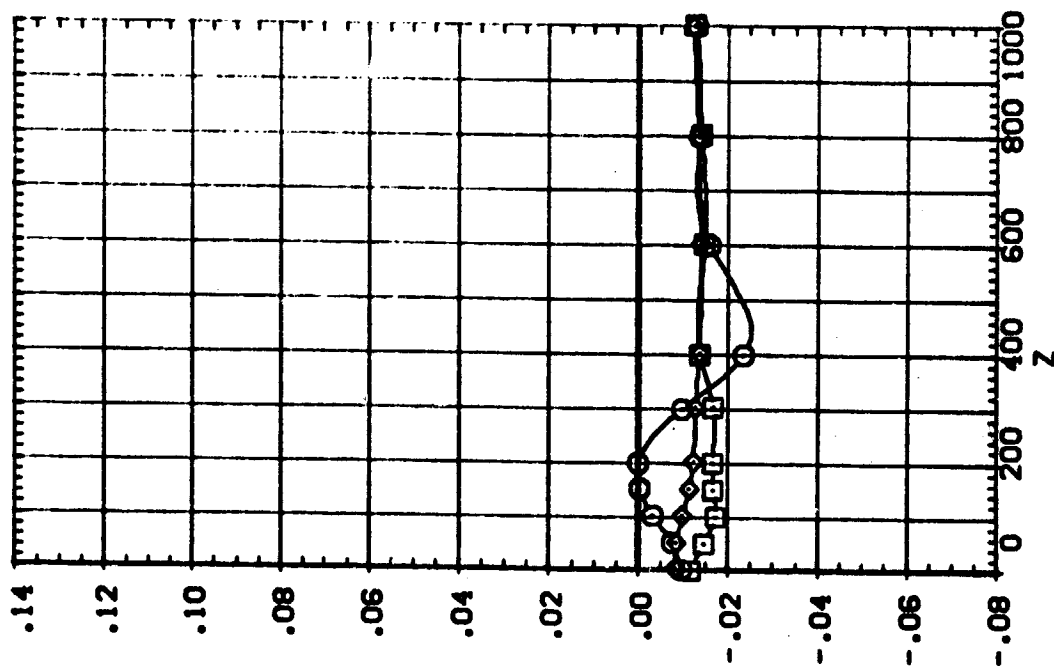
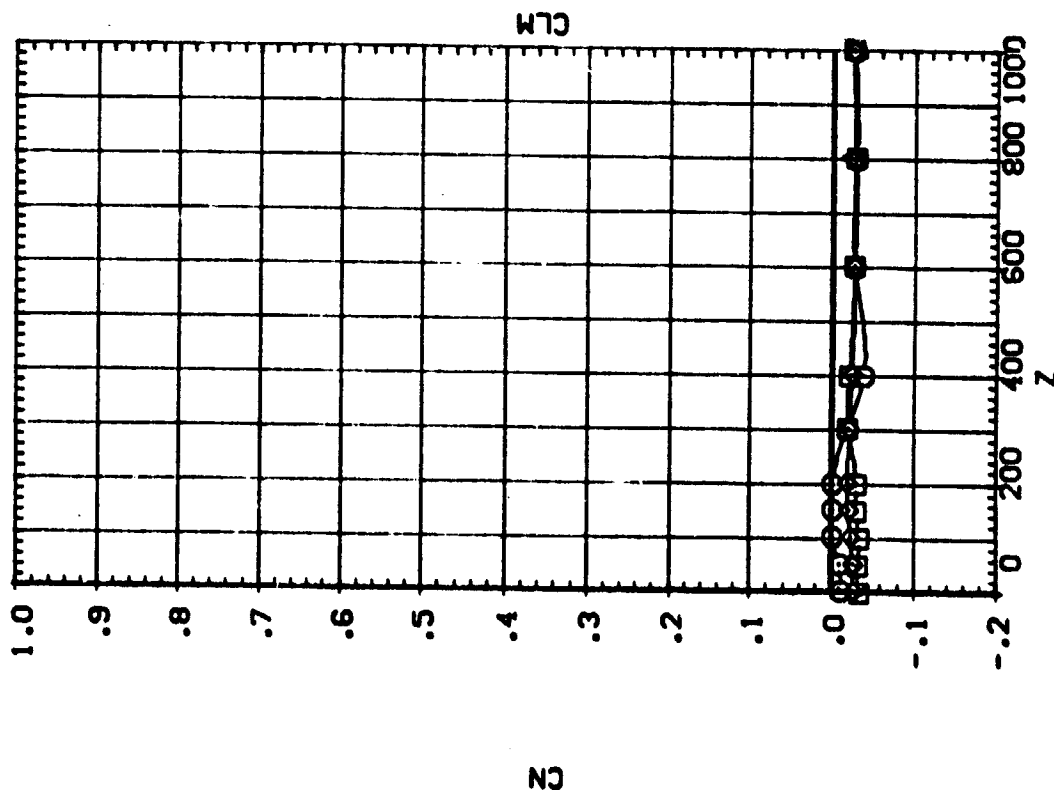
SYMBOL

□
◇
△

PARAMETRIC VALUES

| Y | MACH | PTOTL |
|---------|-------|----------|
| -701 | 4.510 | 20.900 |
| 190.910 | .000 | -5.000 |
| 401.500 | .000 | .000 |
| 800.110 | .000 | 1500.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

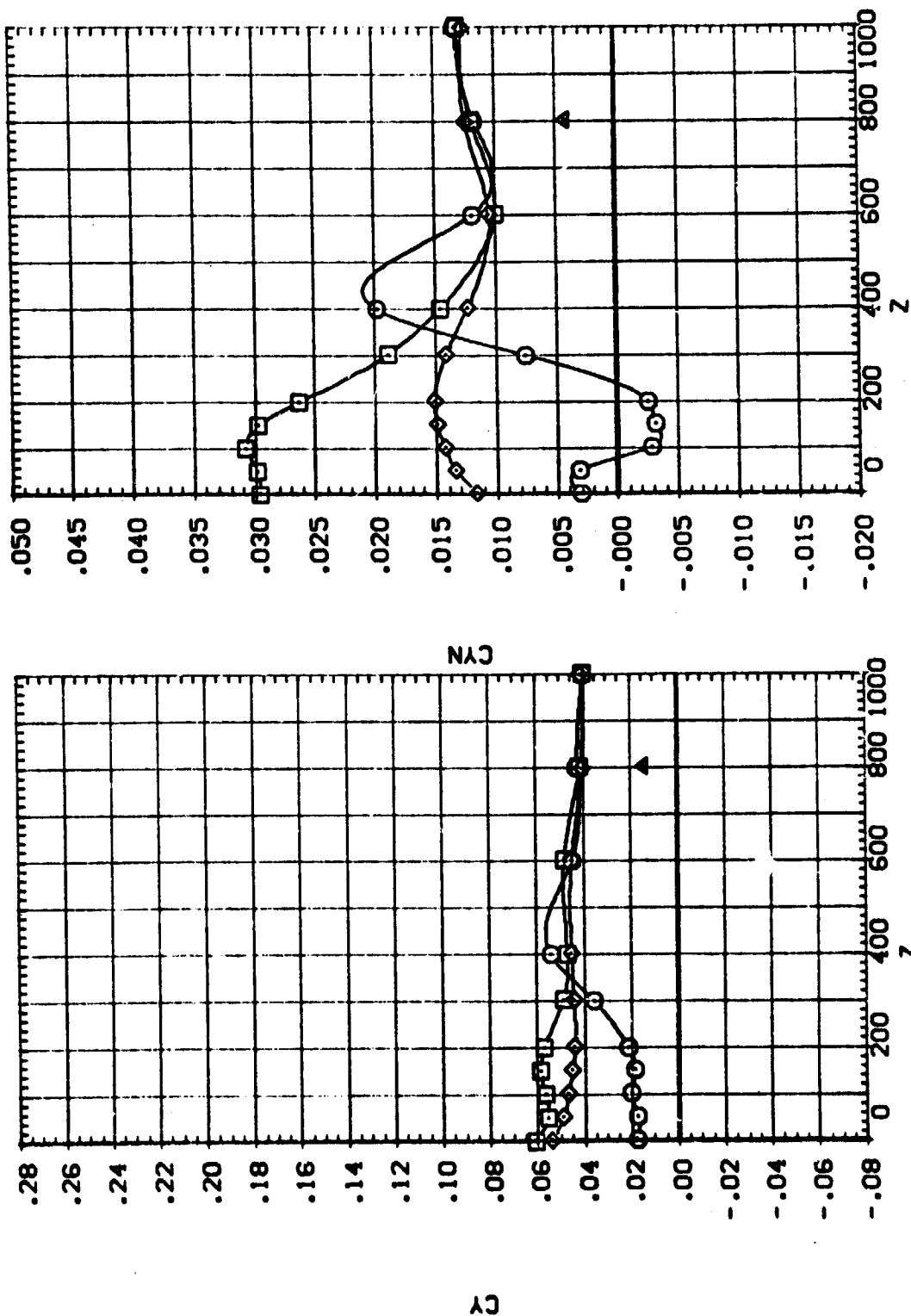


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ465)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | | PARAMETRIC VALUES | | | | |
|--------|---|-------------------|--------|-------|-------|----------|
| ○ | Y | -.701 | MACH | 4.510 | PTOTL | 28.900 |
| □ | | 199.910 | ALPHA | .000 | BETA | -5.000 |
| ◇ | | 401.900 | DALPHA | .000 | DBETA | .000 |
| △ | | 800.110 | X | .000 | PC48 | 1500.000 |

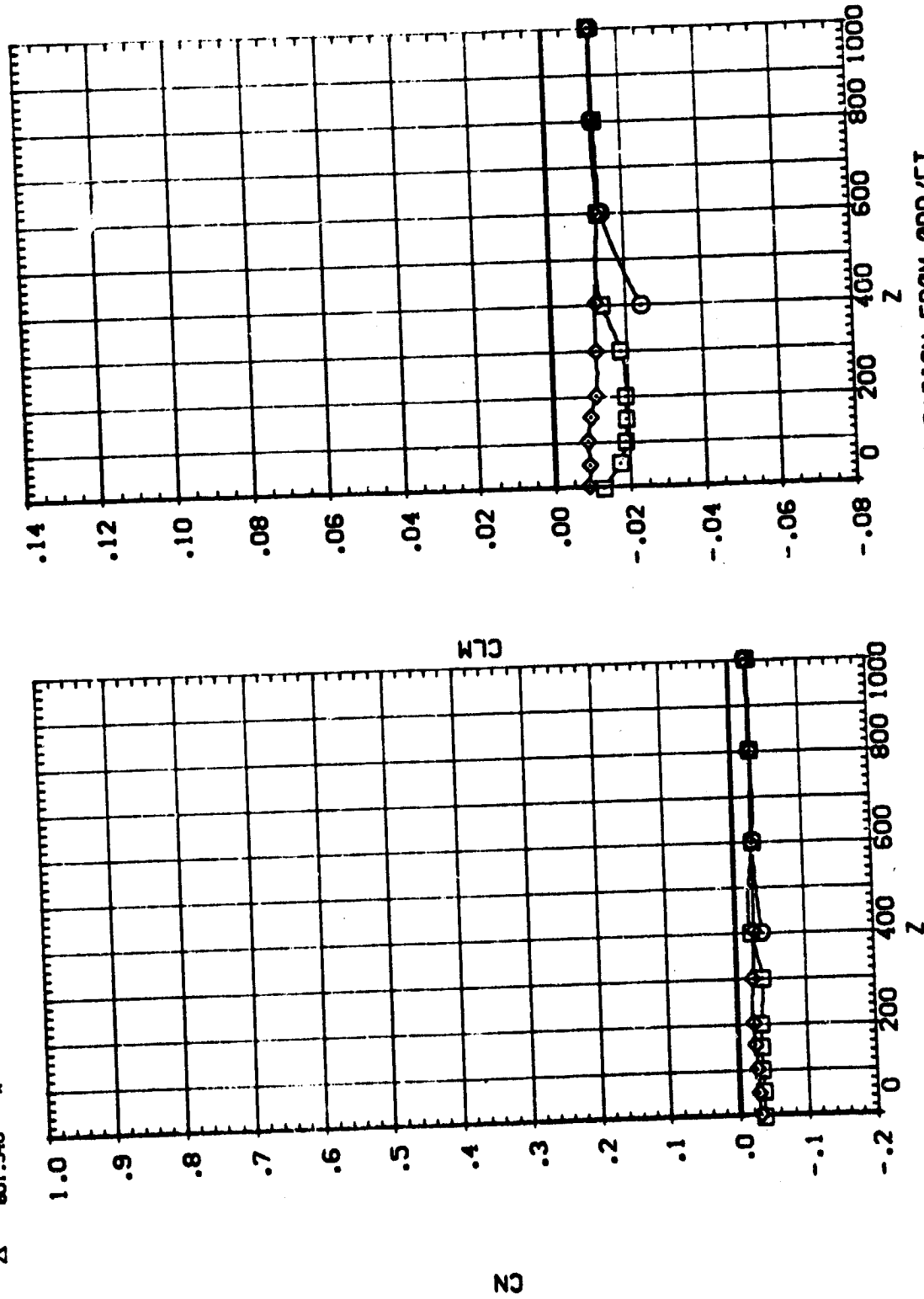


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 08B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ466)

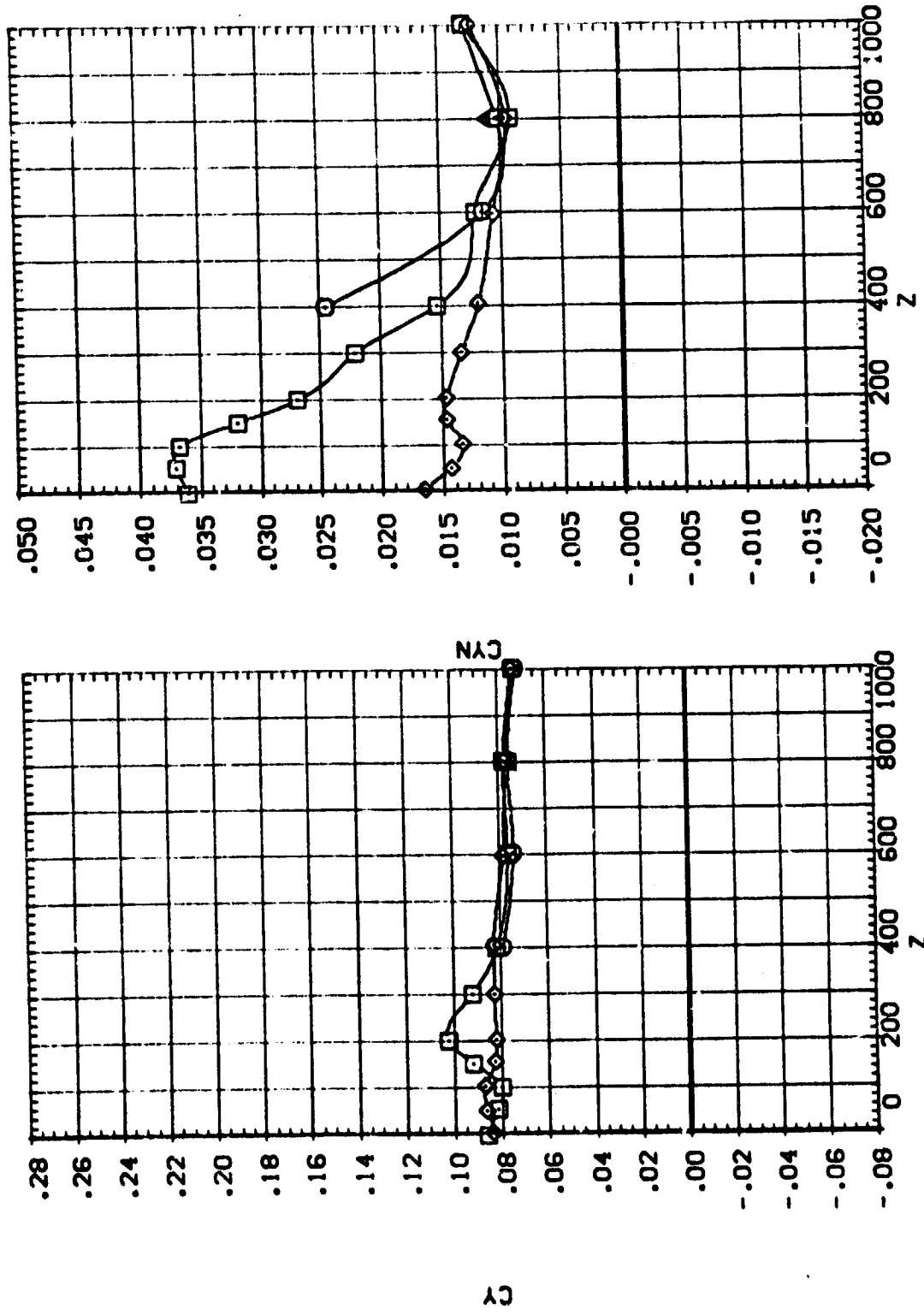
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | |
|--------|---------|-------|-------------------|----------|
| □ | .731 | 4.510 | PTOTL | 28.900 |
| ◇ | 200.500 | .000 | BETA | -5.000 |
| ◇ | 400.460 | .000 | DBETA | -5.000 |
| △ | 801.540 | .000 | PC+PB | 1500.000 |



SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.500 | |
| ○ | 200.500 | ALPHA | .000 | BETA | -5.000 | |
| □ | 400.460 | DALPHA | .000 | DBETA | -5.000 | |
| ◇ | 801.540 | X | .000 | PCPB | 1500.000 | |

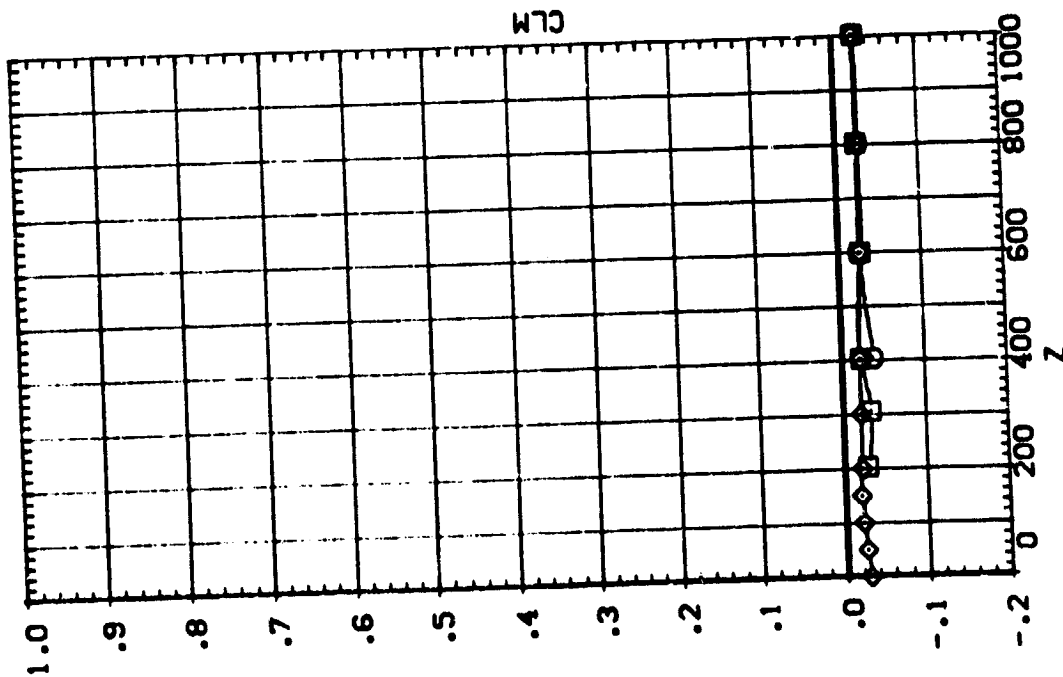
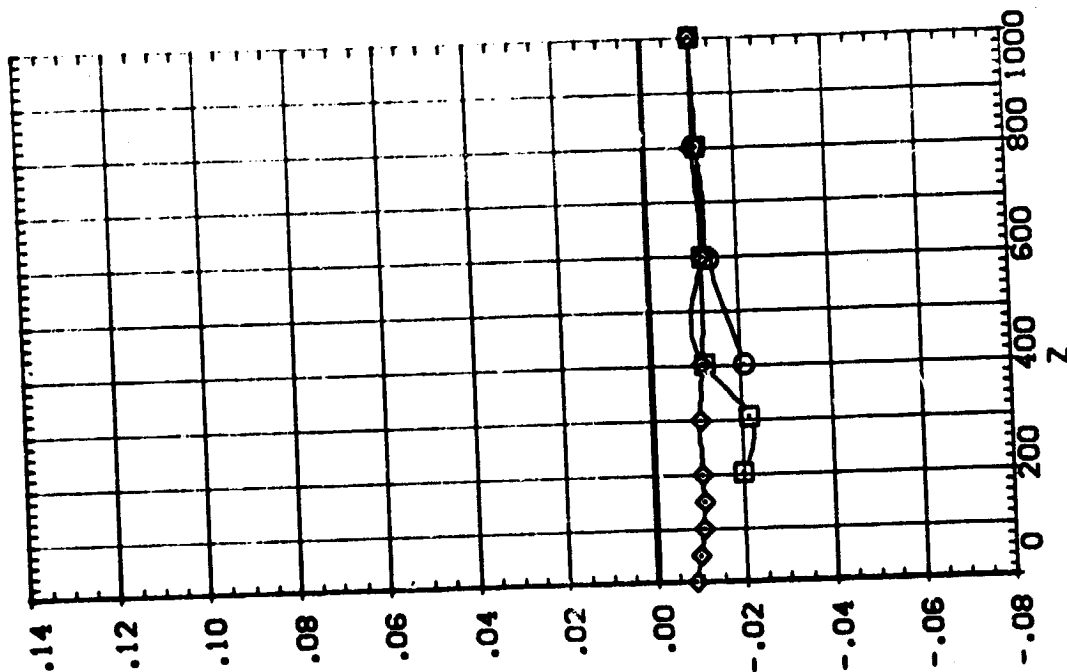


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ467)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | |
|--------|---------|-------|-------------------|----------|
| ○ | 2.012 | 4.510 | POTN | 28.900 |
| □ | 199.930 | .000 | BETA | -5.000 |
| ◇ | 399.770 | .000 | DBETA | -10.000 |
| △ | 801.270 | .000 | PC-HB | 1500.000 |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ467)

SYMBOL

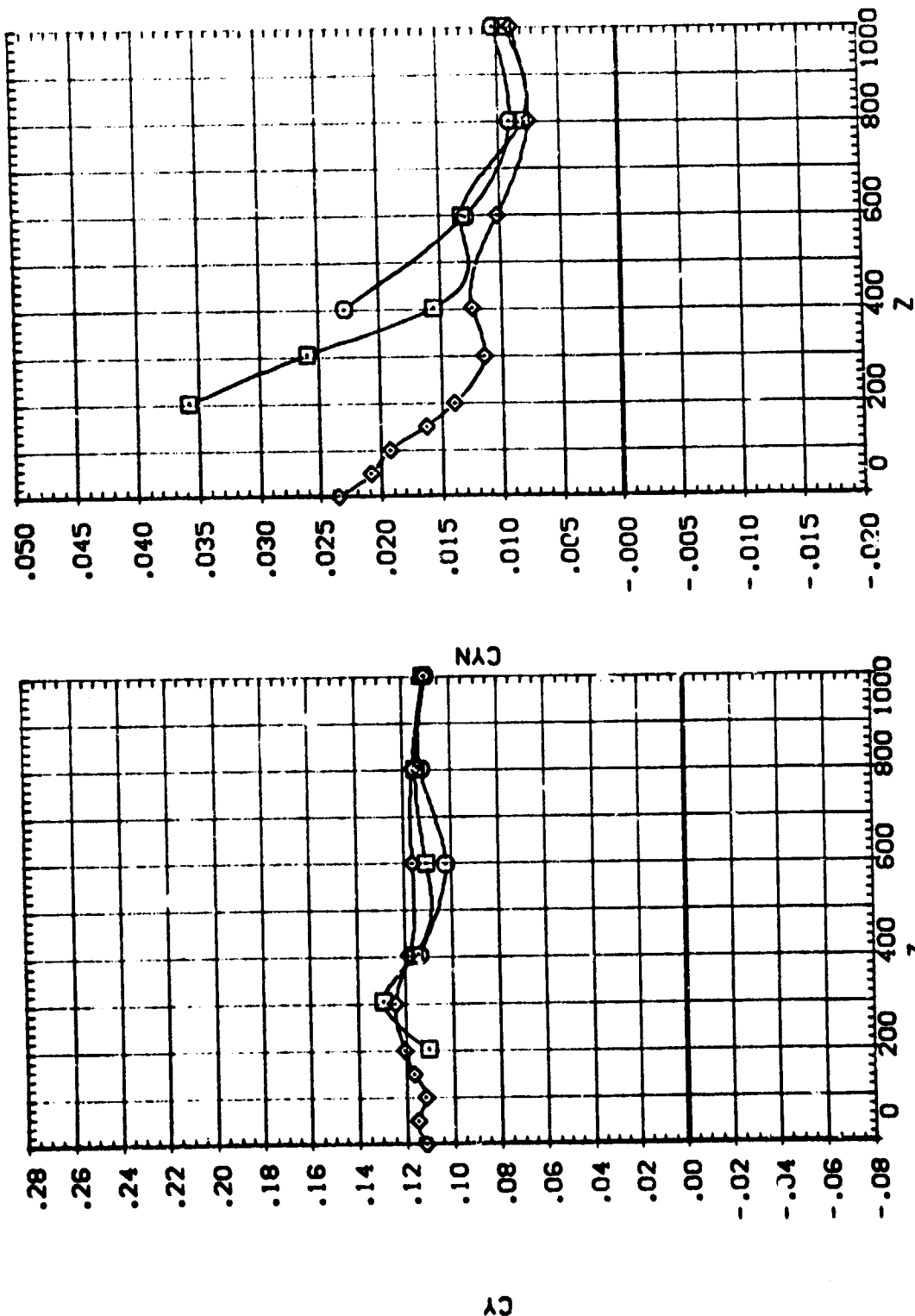
2.012
199.930
399.770
921.270

MACH
ALPHA
DALPHA
K

PARAMETRIC VALUES

4.510 PTOTL 28.900
.000 BETA -5.000
.000 DBETA -10.000
.000 PC48 1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

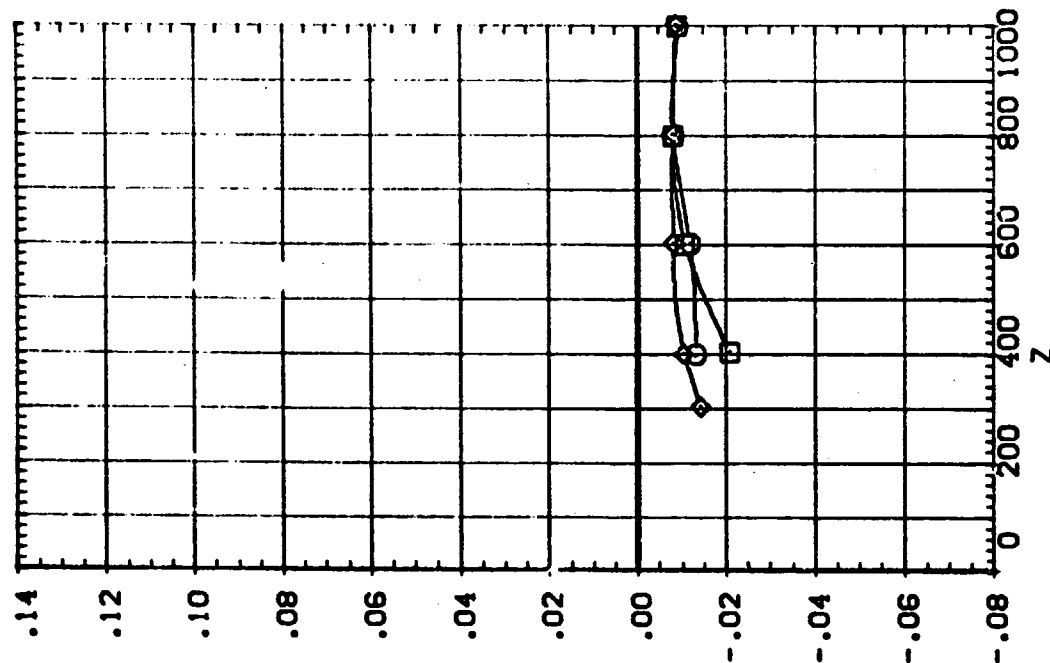
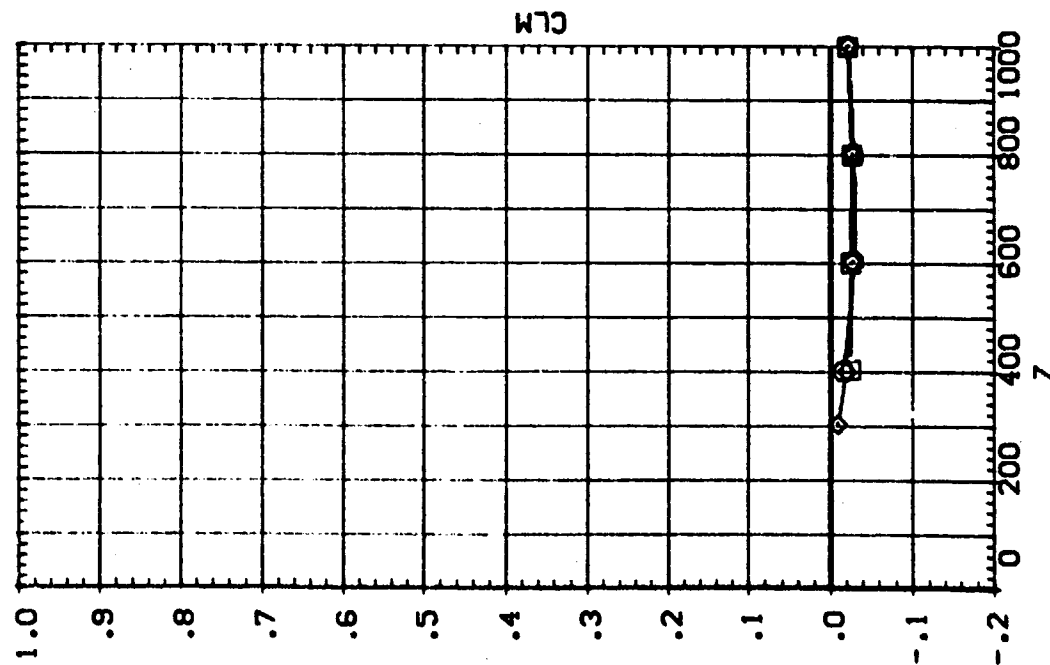


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ468)

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | P10TL | 28.900 | |
| ○ | 159.950 | ALPHA | .003 | BETA | -5.000 | |
| □ | 401.250 | DALPHA | .000 | DBETA | -20.000 | |
| ◇ | 800.640 | X | .000 | PC+8 | 1500.000 | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13,SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ468)

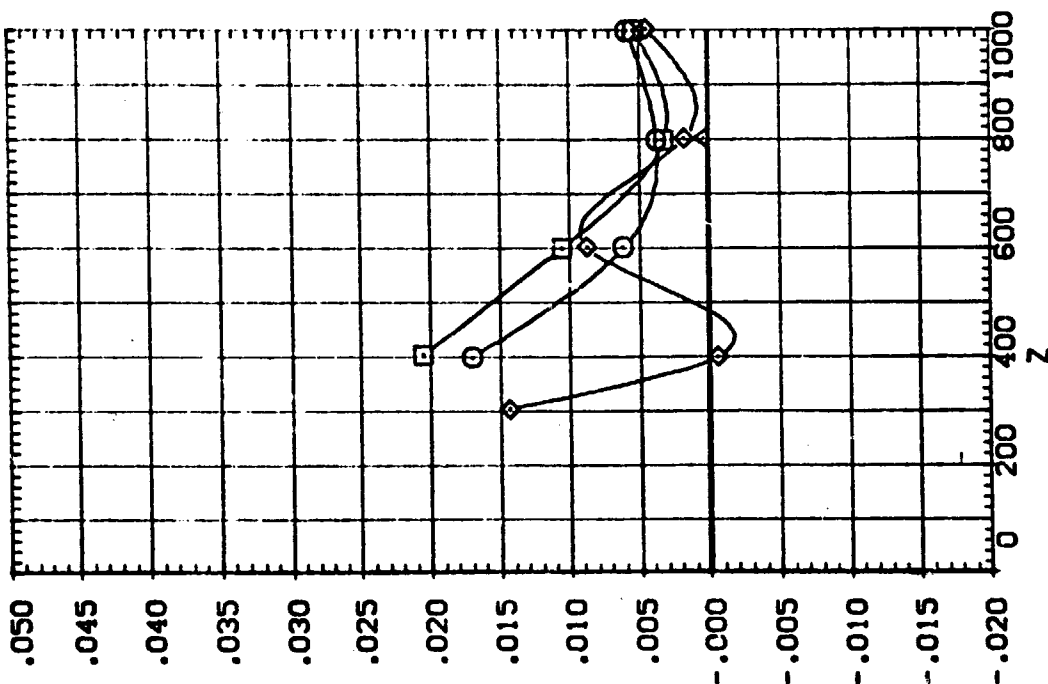
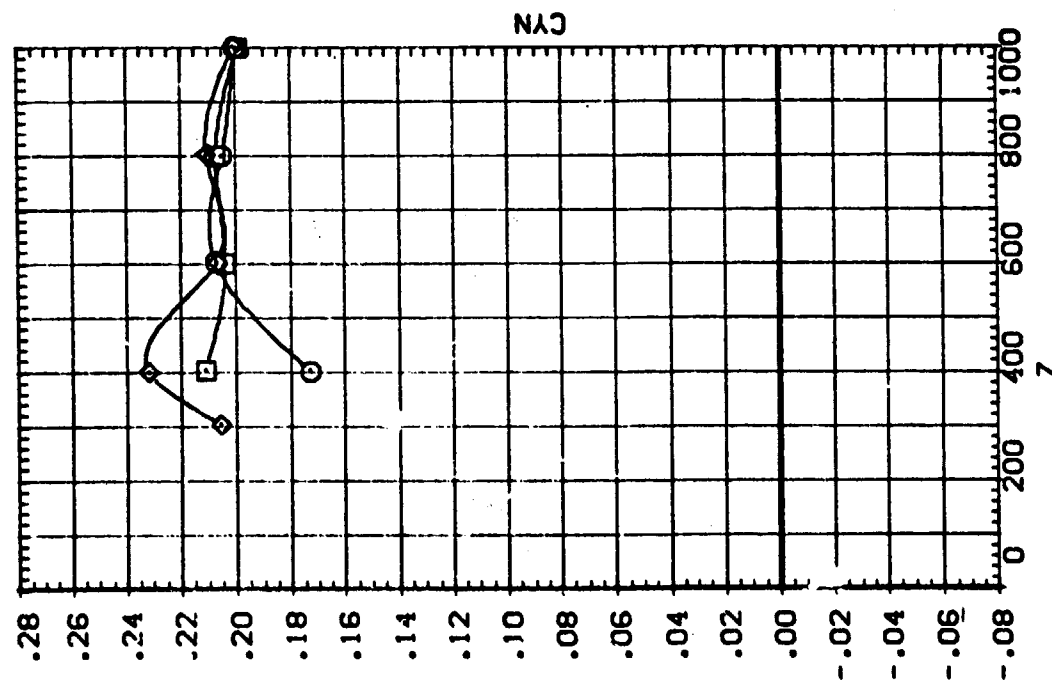
SYMBOL

-
-
- ◇
- △

PARAMETRIC VALUES

| | | | | | |
|---------|------|--------|-------|-------|----------|
| Y | .529 | MACH | 4.510 | PTOTL | 28.900 |
| 199.950 | | ALPHA | .000 | BETA | -5.000 |
| 401.250 | | DALPHA | .000 | DBETA | -20.000 |
| 800.640 | | X | .000 | PC-MB | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS



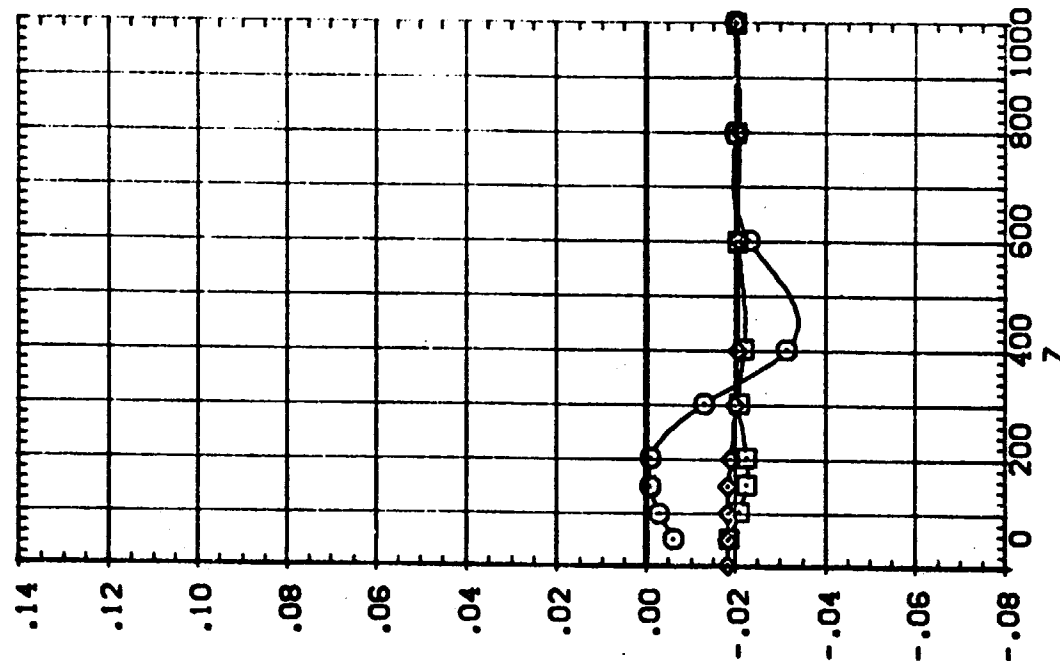
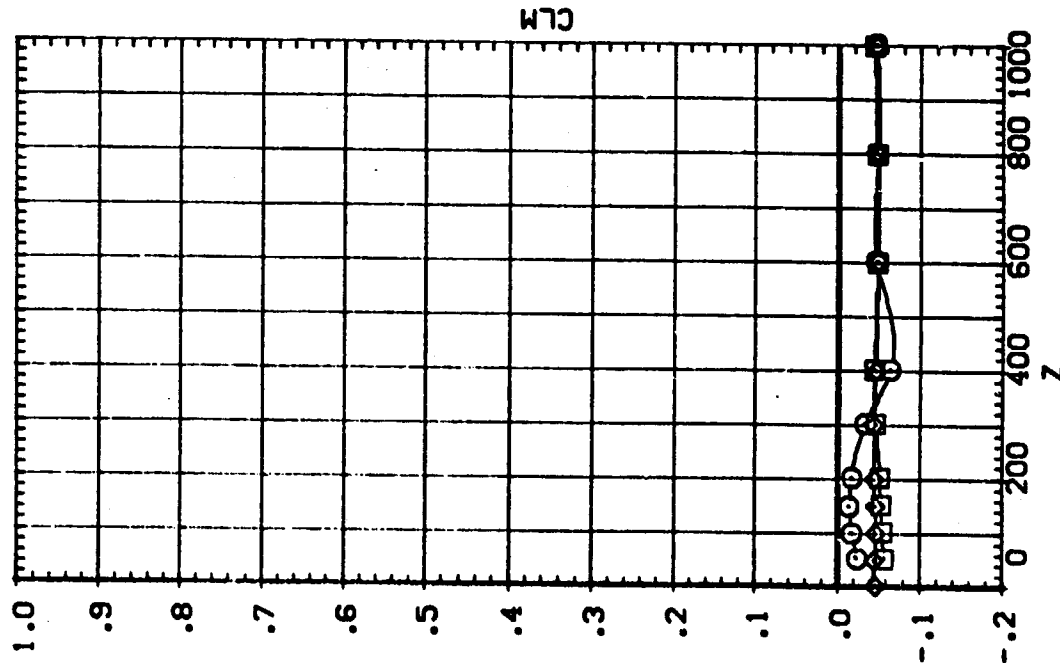
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ469)

SYMBOL
 ○ □ ◇ △

PARAMETRIC VALUES
 Y .397 MACH 4.510 PTOTL 28.900
 200.950 ALPHA .000 BETA -5.000
 399.720 DALPHA -5.000 DBETA 5.000
 800.640 X .000 PC-HB 1500.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS

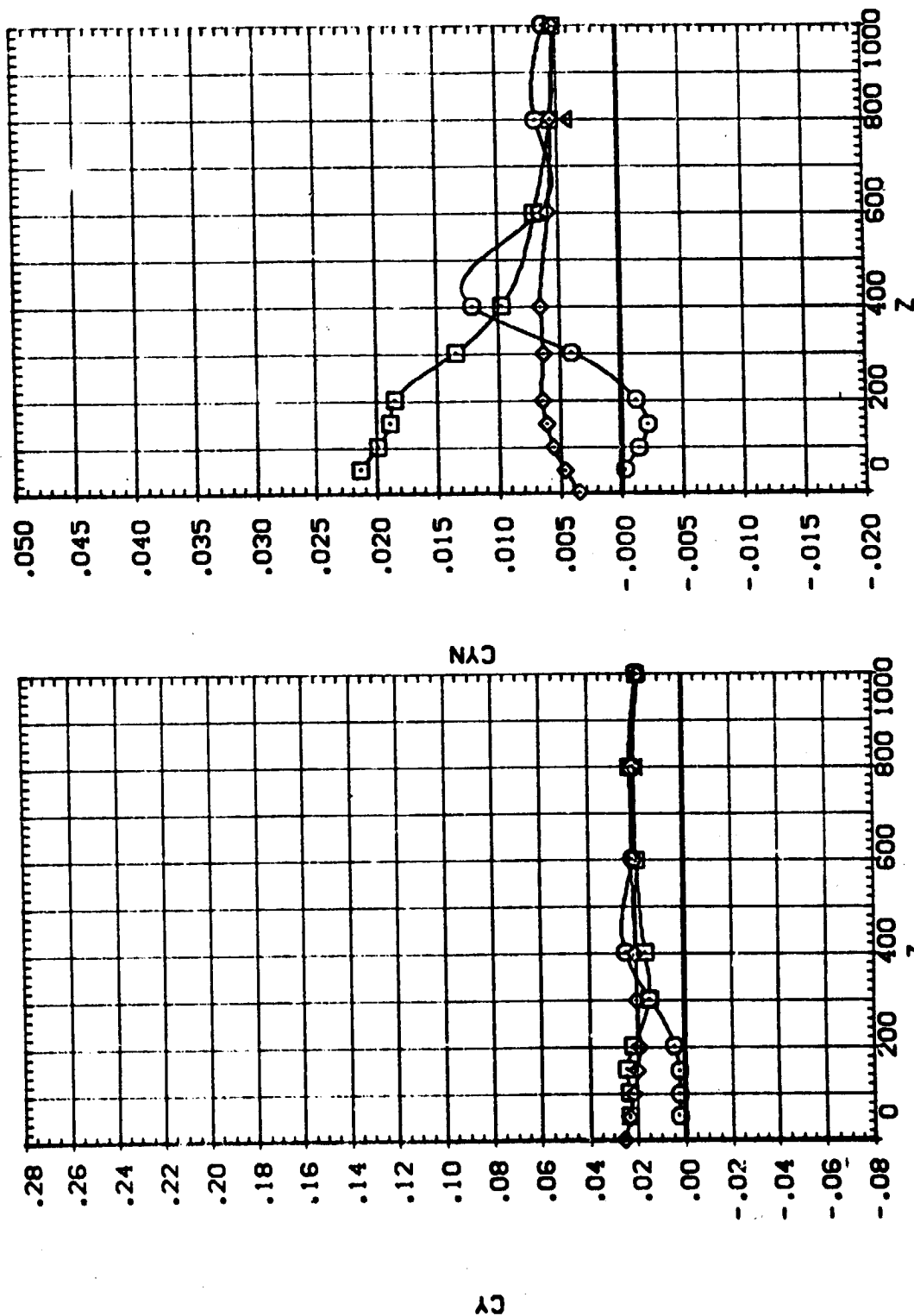


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ469)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL Y MACH PARAMETRIC VALUES
 O .397 4.510 PTOTL 28.900
 □ 200.990 ALPHA .000 BETA -5.000
 ◇ 399.720 DAPHA -5.000 DBETA 5.000
 △ 800.640 X PC+PB 1500.000

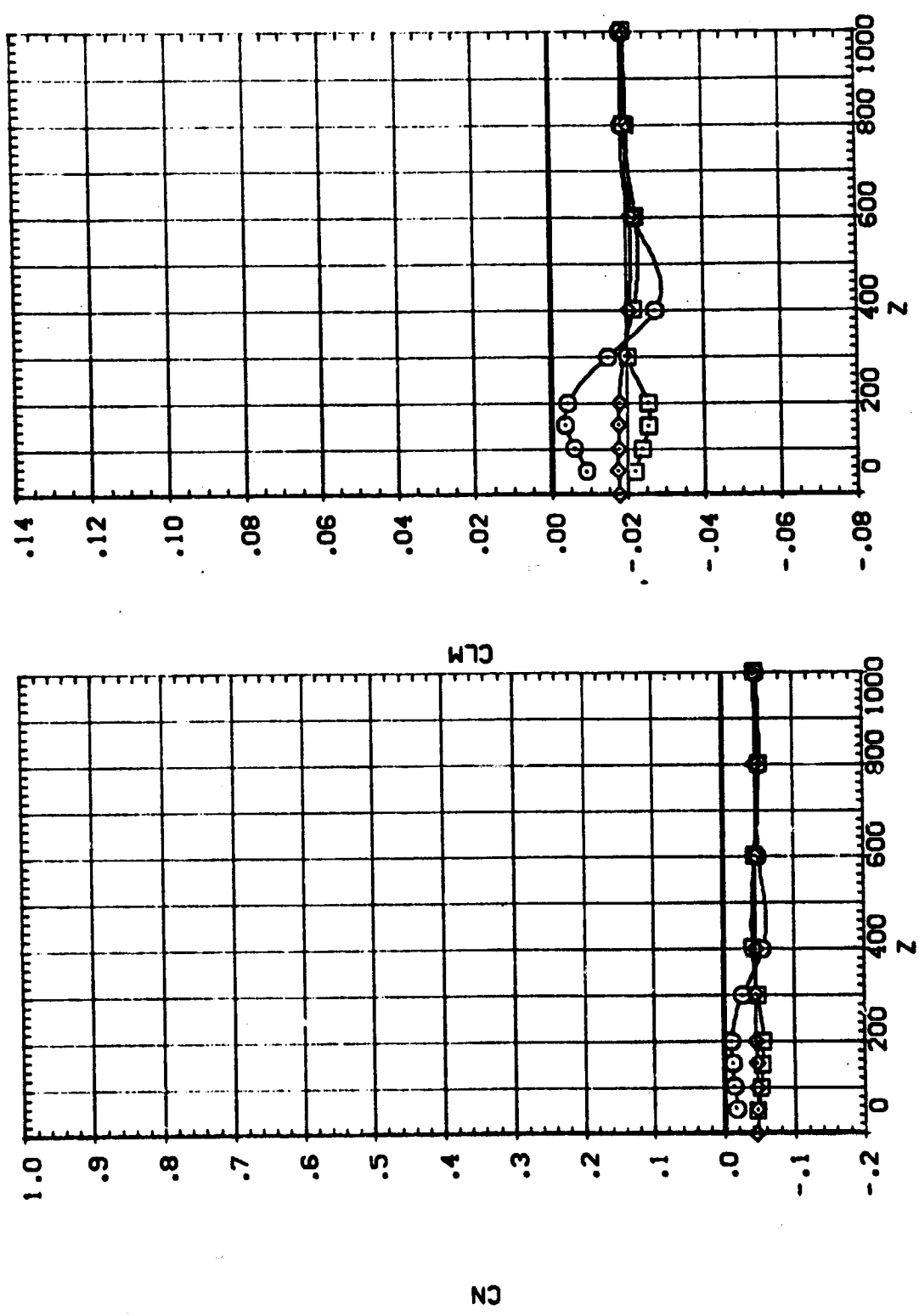


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ470)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | | |
|--------|---------|-------------------|--------|-------|----------|--|--|
| | | MACH | 4.510 | PTOTL | 28.900 | | |
| ○ | 200.050 | ALPHA | .000 | BETA | -5.000 | | |
| □ | 400.040 | DALPHA | -5.000 | DBETA | .000 | | |
| ◇ | 600.160 | X | .000 | PC-M8 | 1500.000 | | |

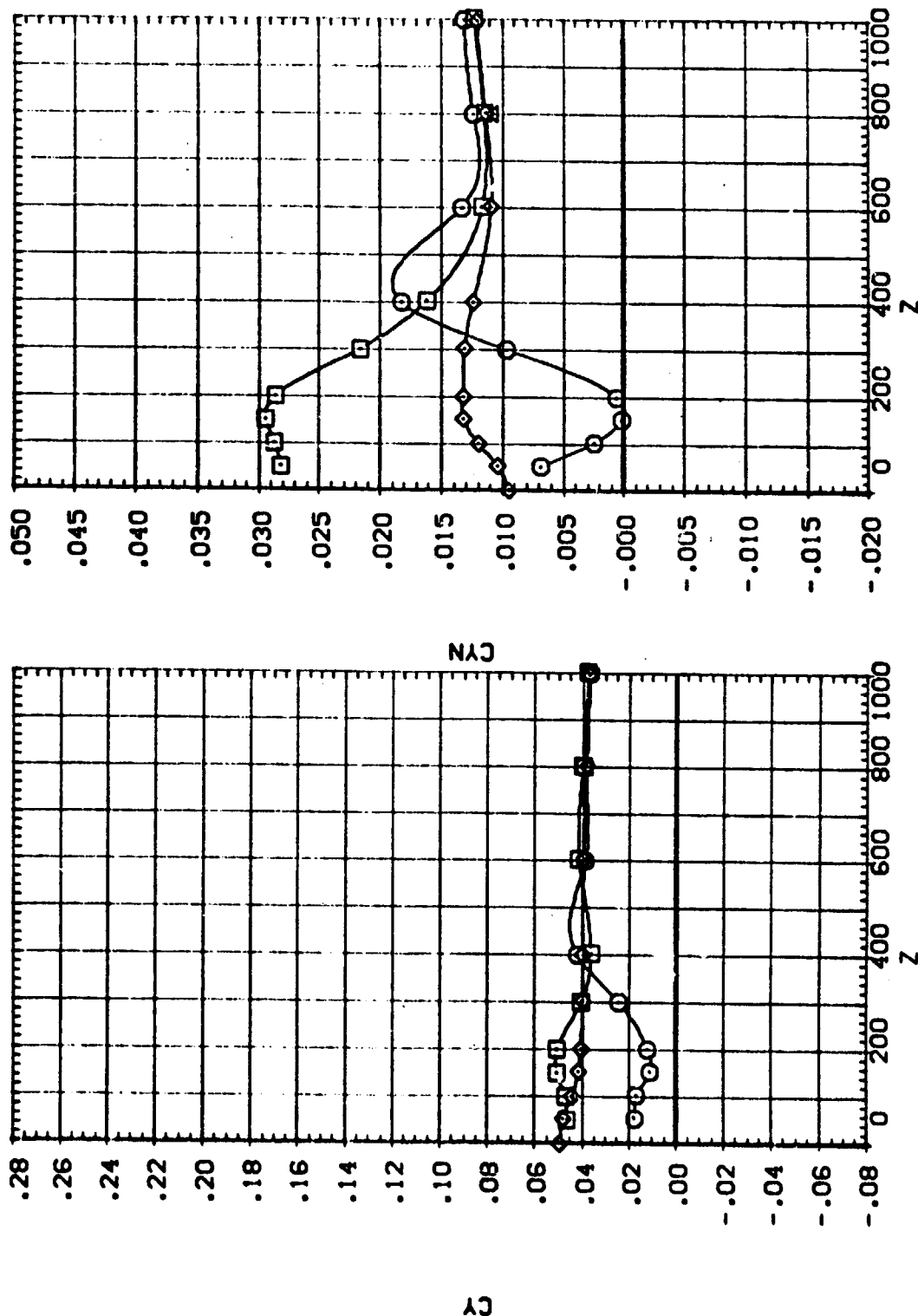


1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ470)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL Y MACH ALPHA DYNAMIC X

| SYMBOL | Y | MACH | ALPHA | DYNAMIC | X |
|--------|---------|--------|-------|----------|---|
| ○ | .905 | 4.510 | PTOTL | 28.500 | |
| □ | 200.050 | .000 | BETA | -5.000 | |
| ◇ | 400.040 | -5.000 | DBETA | .000 | |
| △ | 800.160 | .000 | PC+8 | 1500.000 | |

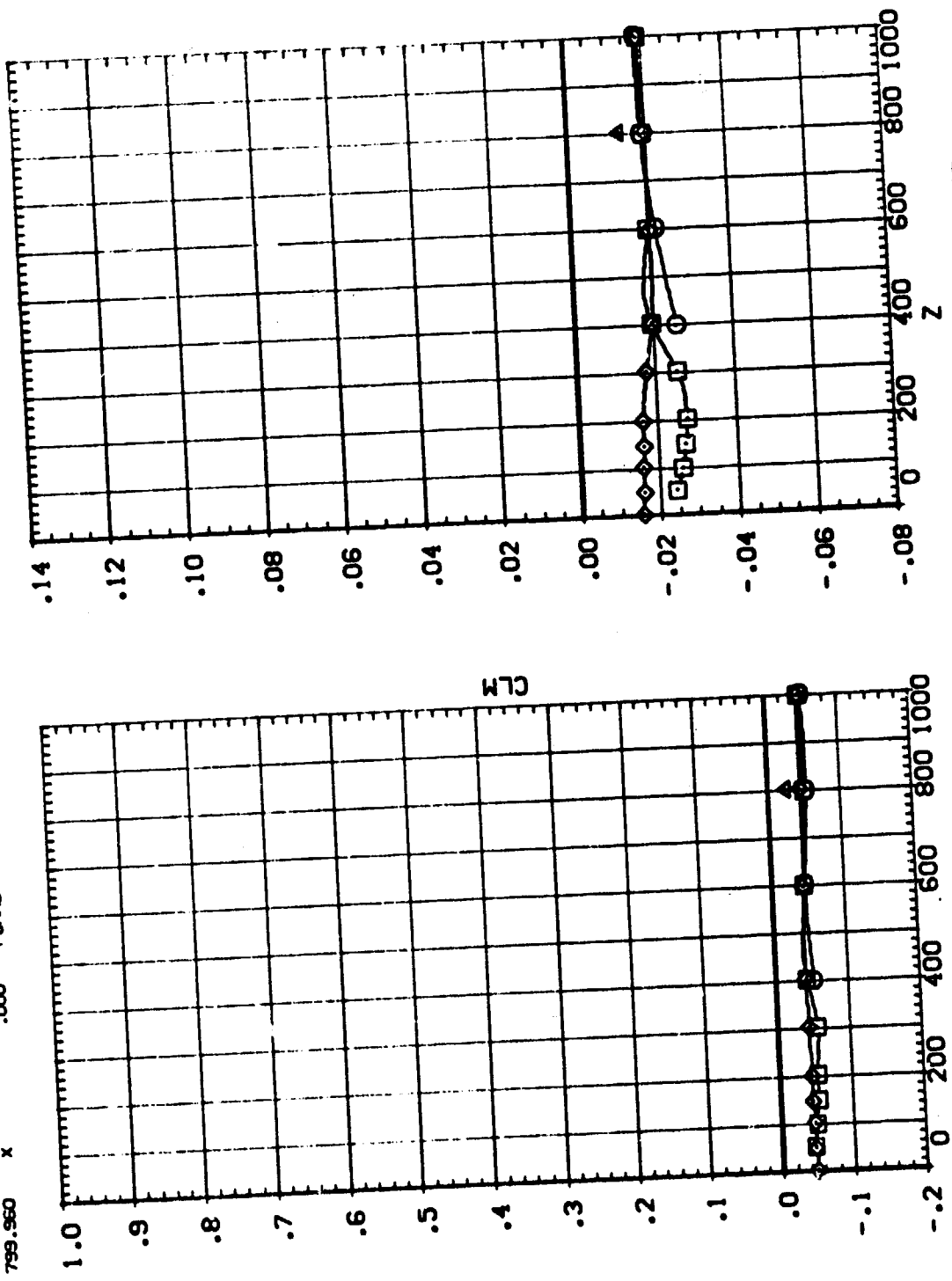


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ471)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

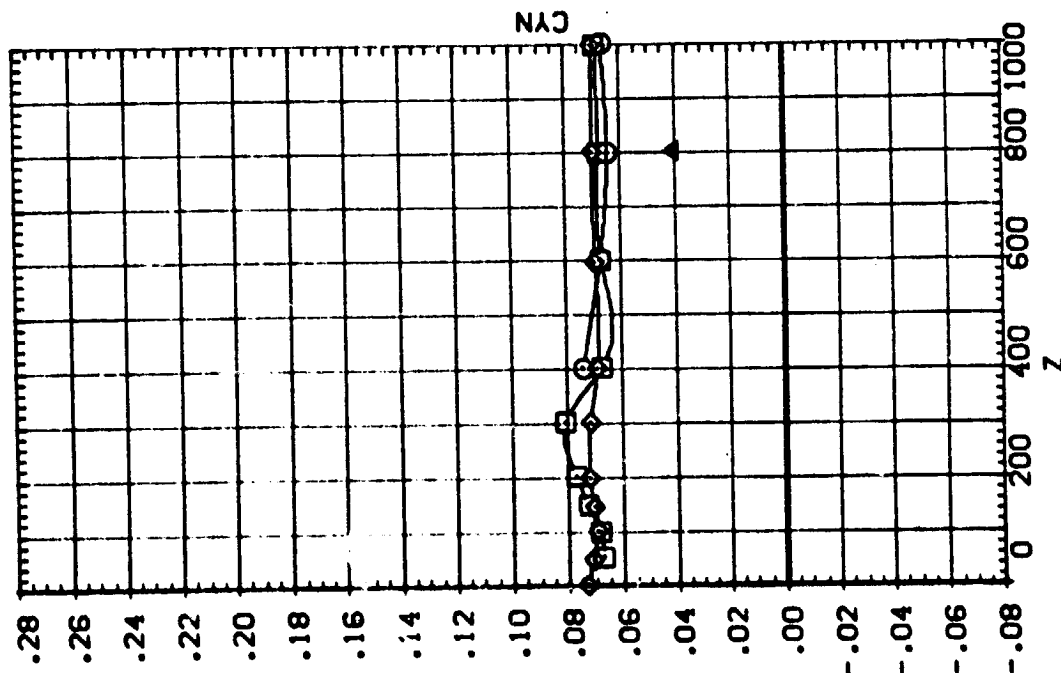
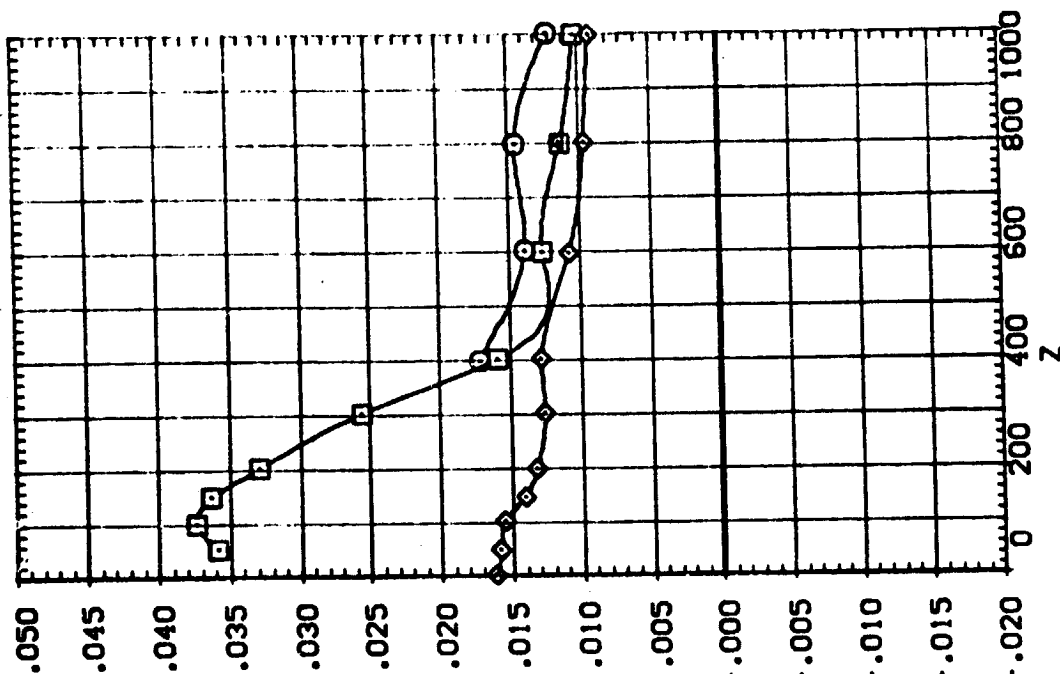
| SYMBOL | PARAMETRIC VALUES | | | |
|--------|-------------------|--------|--------|----------|
| | Y | MACH | 4.510 | PTOTL |
| ○ | -199.350 | ALPHA | .000 | BETA |
| ◇ | 399.170 | DALPHA | -5.000 | DBETA |
| △ | 799.950 | X | .000 | PC4#8 |
| | | | | 1500.000 |



1A13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ471)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|--------|-------------------|-------|----------|--|
| | | | 4.510 | P10T1 | 28.900 | |
| □ | 199.350 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 399.170 | DALPHA | -5.000 | DBETA | -5.000 | |
| △ | 799.960 | X | .000 | PC-HB | 1500.000 | |

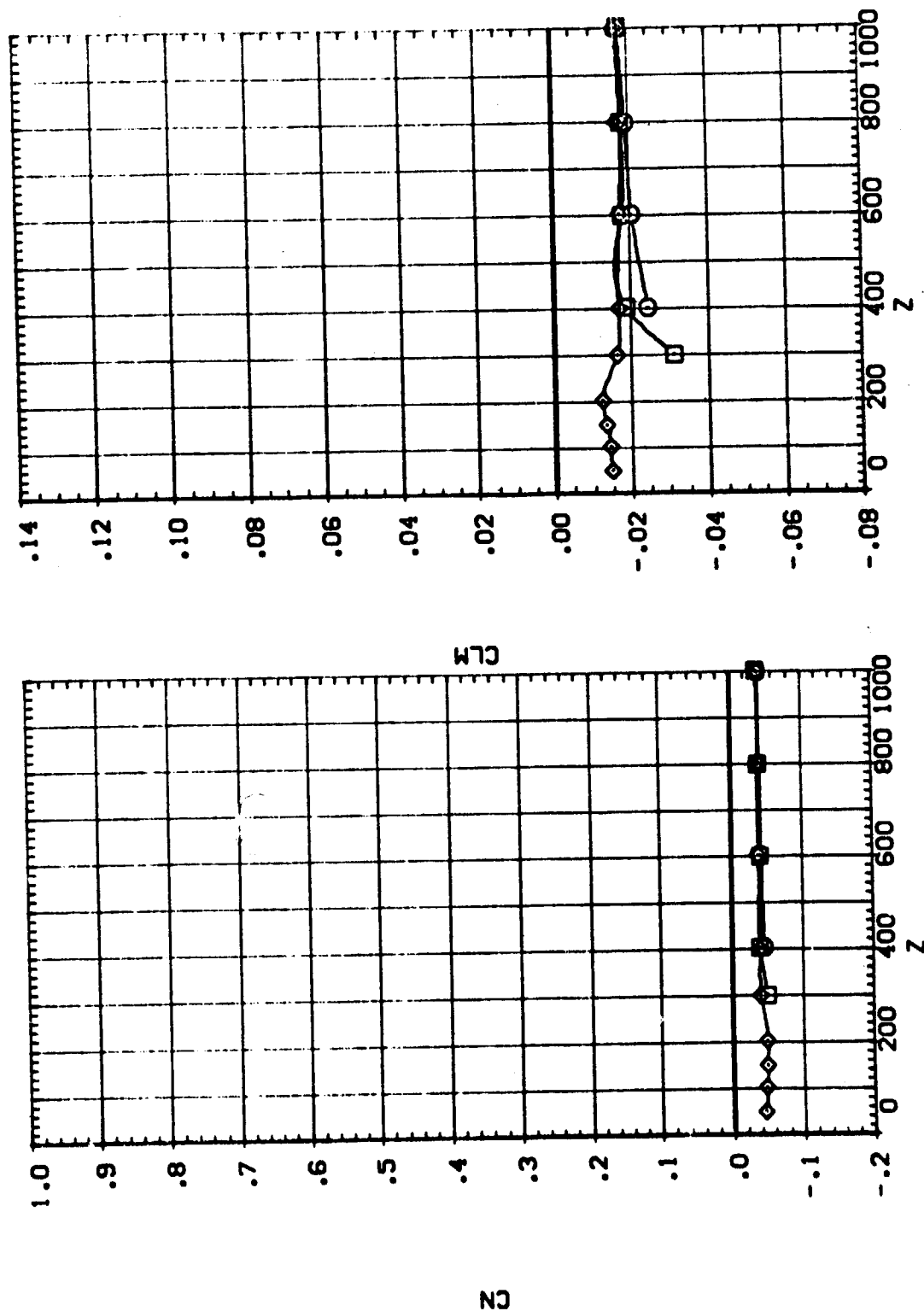


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/EI

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ472)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|----------|-------|
| | | MACH | PTOTL | BETA | PC+P8 |
| ○ | .591 | 4.510 | 28.500 | -5.000 | |
| □ | 200.420 | .000 | BETA | -10.000 | |
| ◇ | 399.670 | -5.000 | DBETA | 1500.000 | |
| △ | 800.680 | .000 | PC+P8 | | |



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ472)

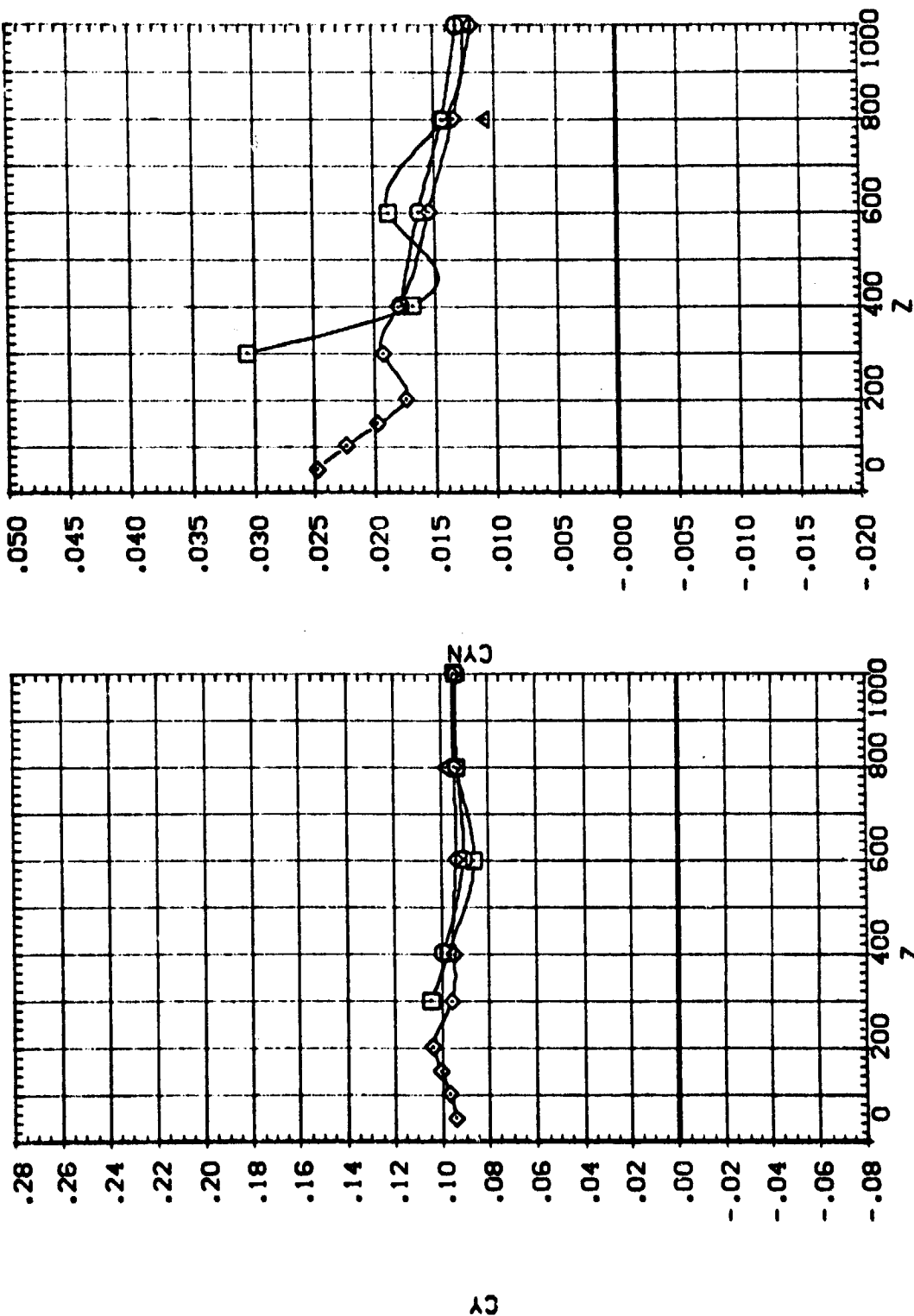
SYMBOL

Y
O
◇
△

PARAMETRIC VALUES

| Y | MACH | PTOTL | 28.900 |
|---------|--------|-------|----------|
| 200.420 | 4.510 | BETA | -5.000 |
| 399.670 | -5.000 | DBETA | -10.000 |
| 800.680 | .000 | PC+PB | 1500.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

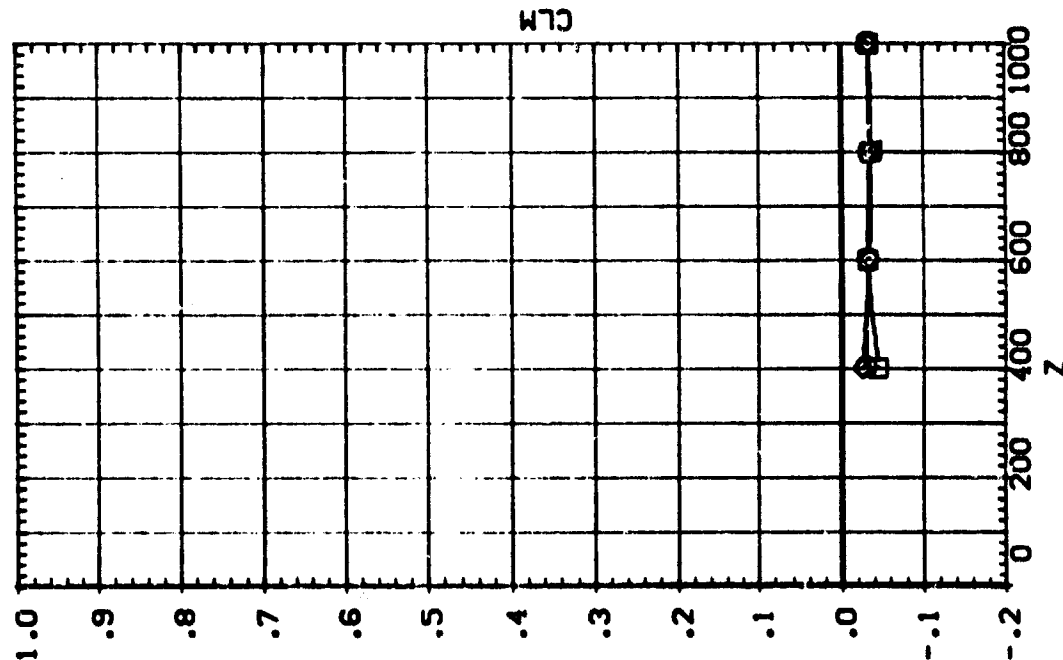
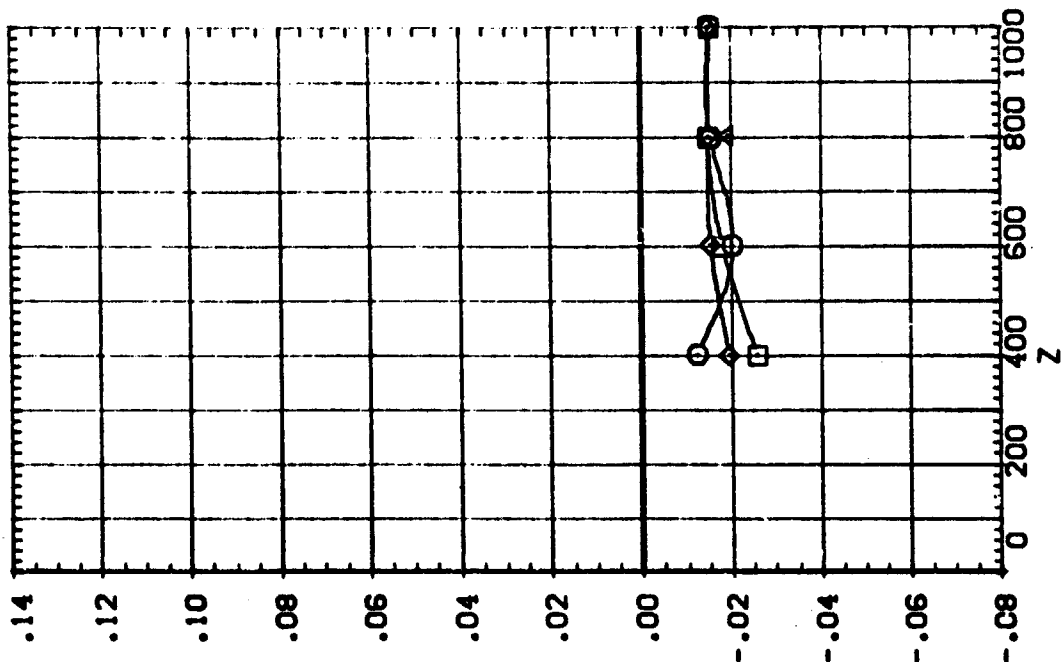


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ473)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | |
|--------|---------|-------------------|--------|-------|----------|
| | | MACH | 4.510 | PTOTL | 28.900 |
| ○ | -2.456 | ALPHA | .000 | BETA | -5.000 |
| □ | 200.310 | DALPHA | -5.000 | DBETA | -20.000 |
| ◇ | 399.680 | X | .000 | PC+8 | 1500.000 |
| △ | 799.450 | | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM CRB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09TIC (RTJ473)

SYMBOL

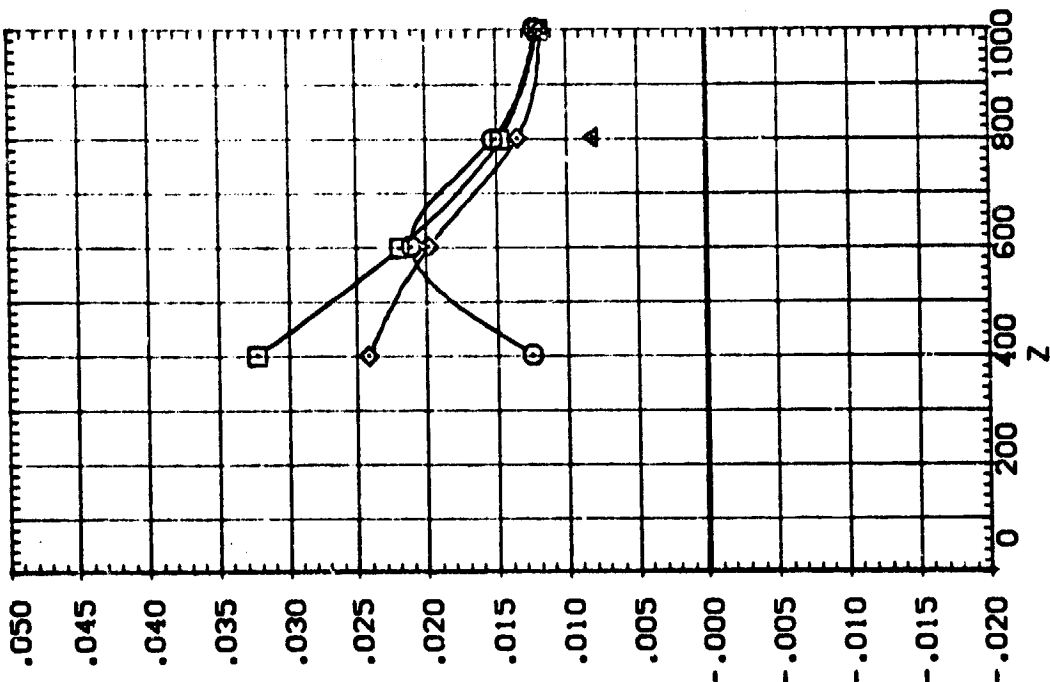
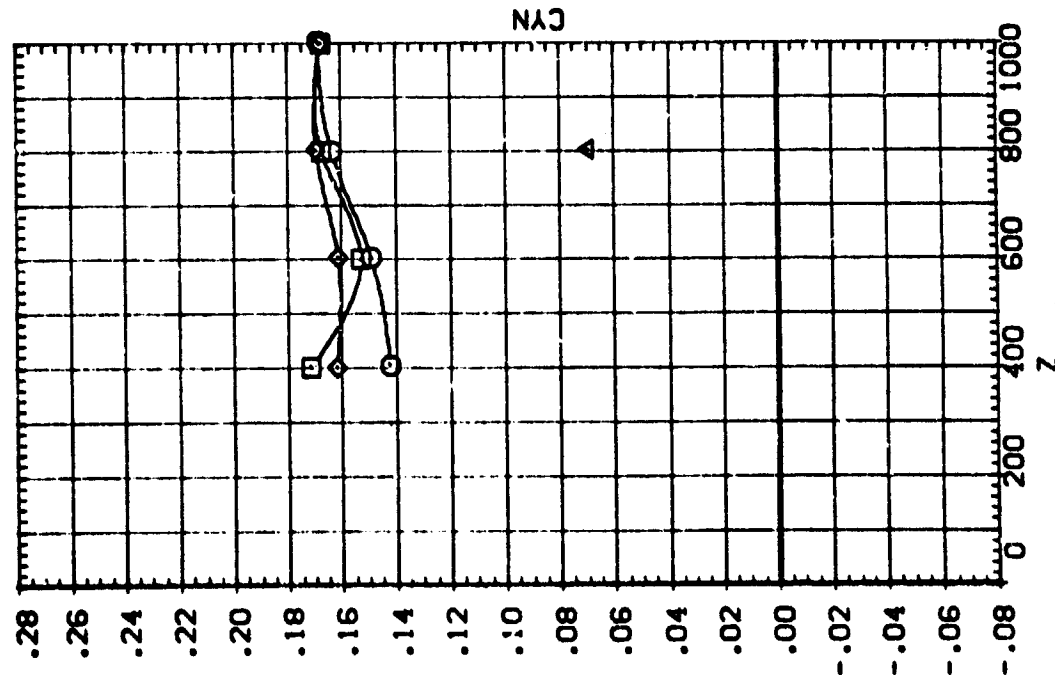
Y
-2.456
200.310
399.680
799.450

MACH
ALPHA
DALPHA
X

PARAMETRIC VALUES
4.510 PTOTL
.000 BETA
-5.000 DBETA
.000 PO+PB

28.900
-5.000
-20.000
1500.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATA SETS

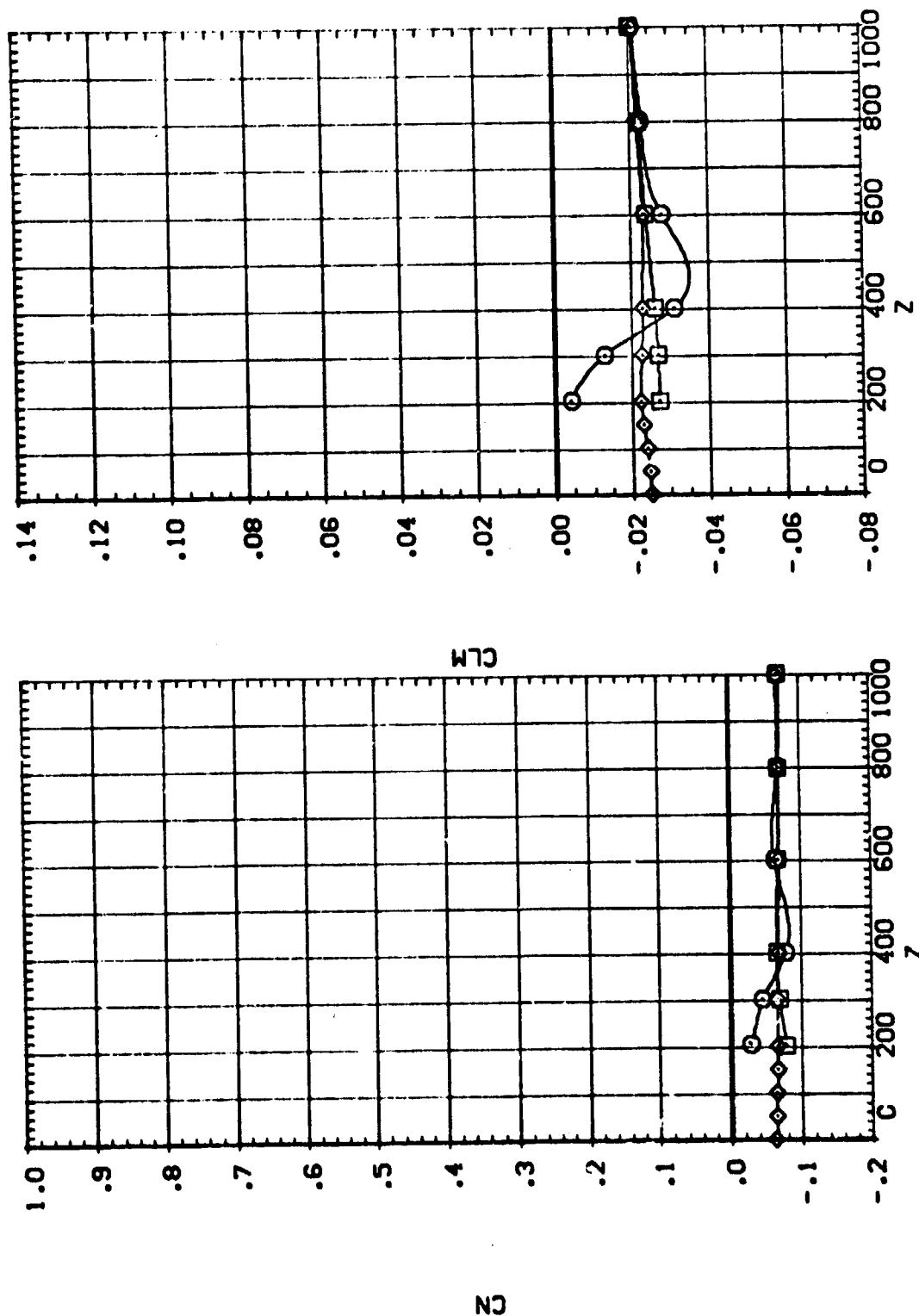


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/ET

IA13.SRB(S8) WITH PLUMES SEPARATING FROM ORBIT (RTJ474)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .642 | 4.510 | POTL 28.900 |
| □ | 200.610 | .000 | BETA -5.000 |
| ◇ | 400.940 | -10.000 | DBETA 5.000 |
| △ | 800.680 | .000 | PC-HB 1500.000 |



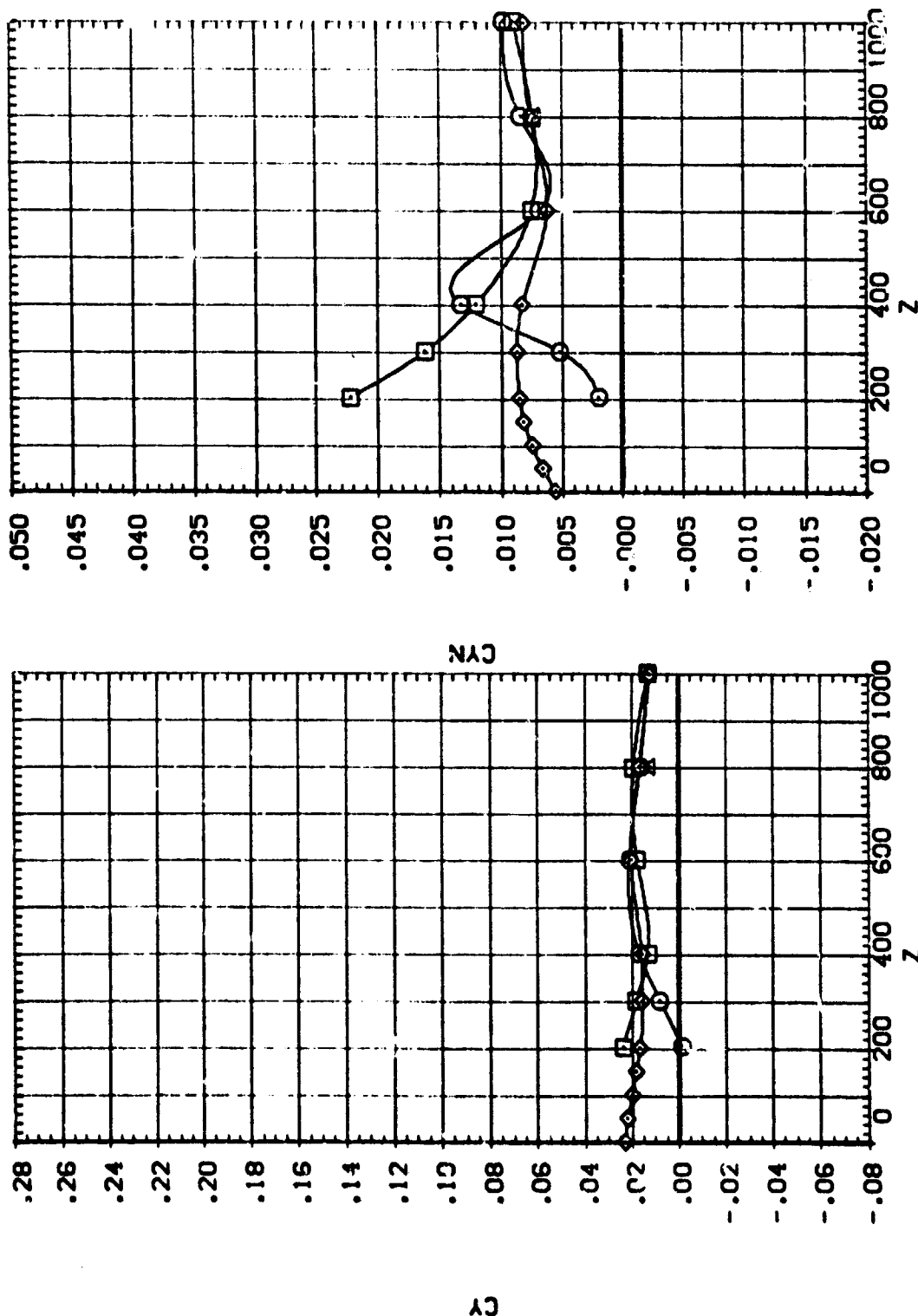
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SYMBOL

PARAMETRIC VALUES

| Y | MACH | ALPHA | DA LPH A | X | POTL | BETA | PC-HB |
|---------|---------|-------|----------|----------|------|------|-------|
| .542 | .510 | .000 | .000 | 28.900 | | | |
| 200.610 | .000 | .000 | .000 | -5.000 | | | |
| 400.940 | -10.000 | .000 | .000 | 5.000 | | | |
| 600.680 | .000 | .000 | .000 | 1500.000 | | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

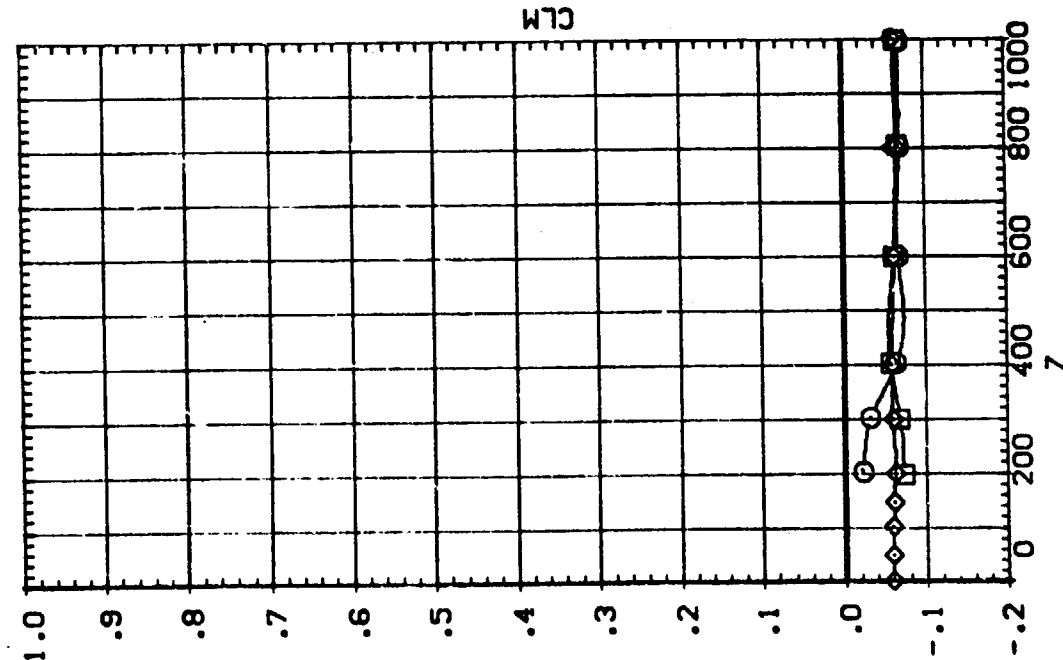
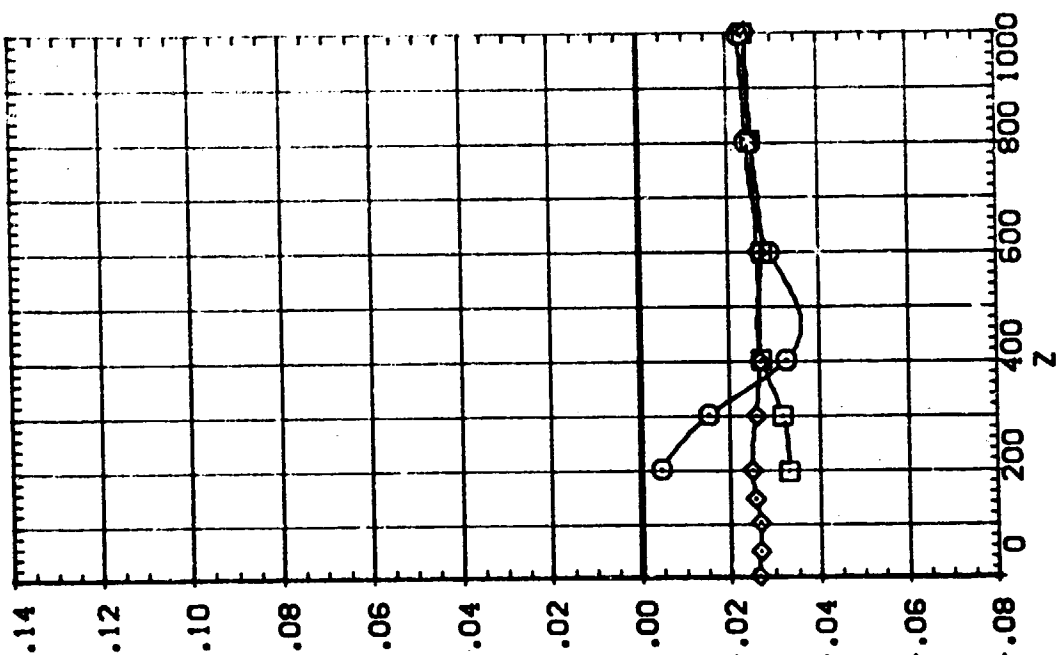


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ475)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES |
|--------|---------|---------|-------------------|
| ○ | .414 | 4.510 | PIOTL 28.900 |
| □ | 200.110 | .000 | BETA -5.000 |
| ◇ | 399.640 | -10.000 | DBETA .000 |
| △ | 799.980 | .000 | PC-HB 1500.000 |

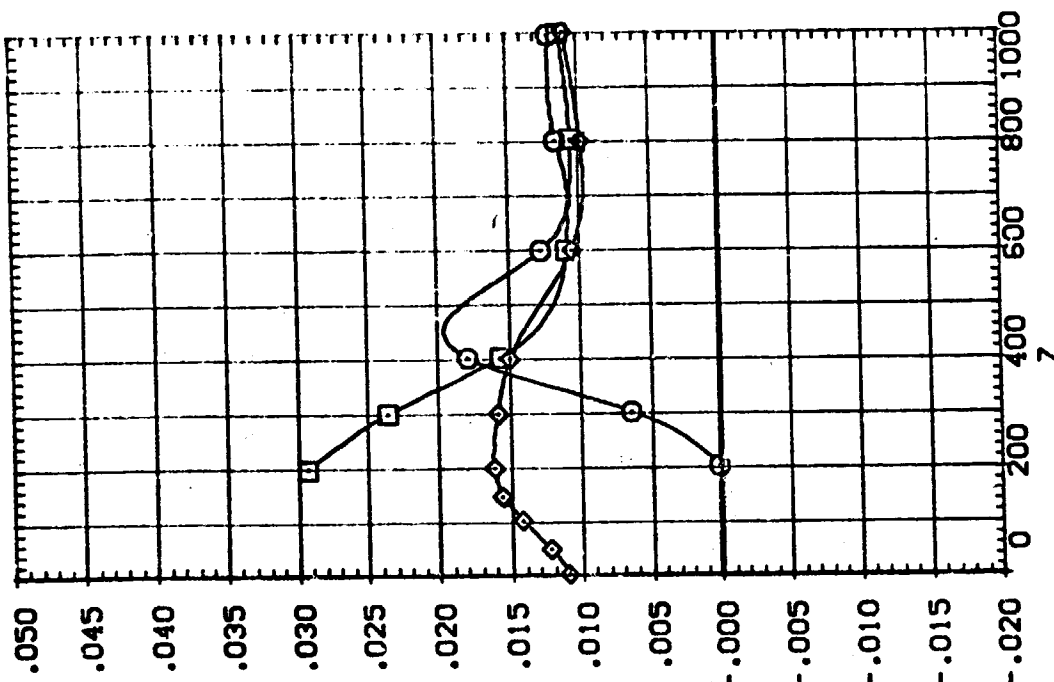
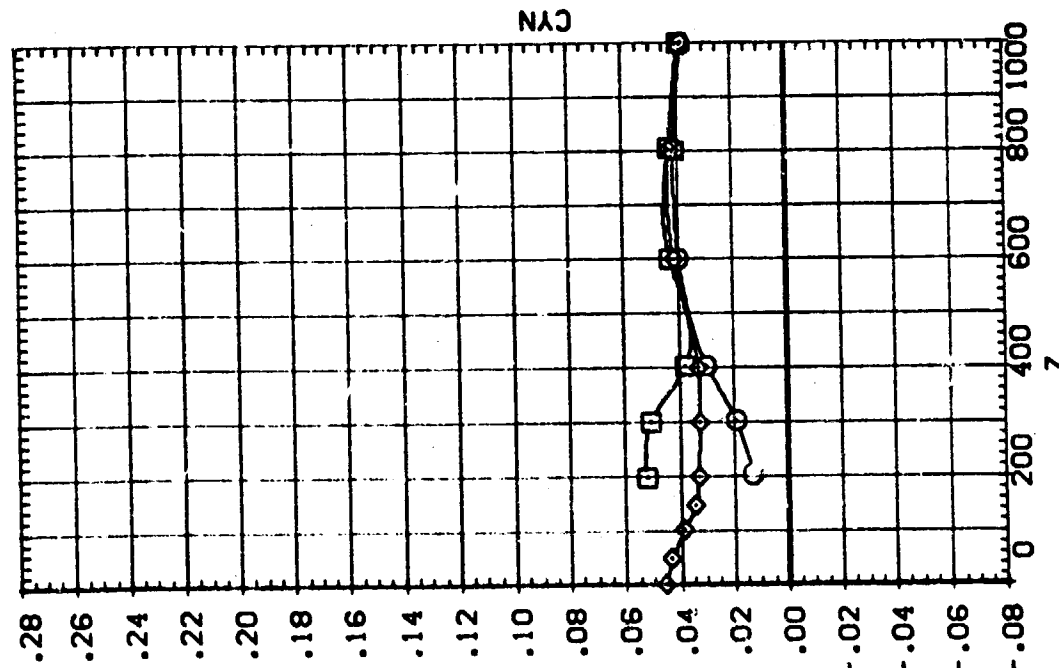


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ475)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 4.510 |
| WACH | 28.900 |
| ALPHA | .000 |
| BETA | -5.000 |
| DALPHA | -10.000 |
| DBETA | .000 |
| PC#8 | 1500.000 |
| X | |

SYMBOL
○ □ ◇ △



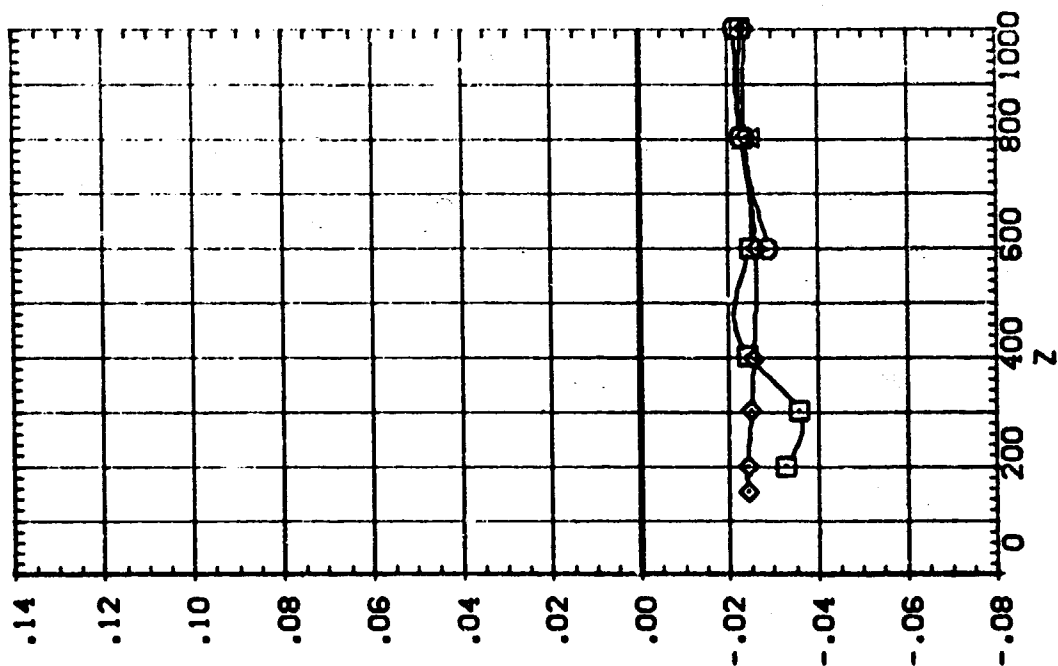
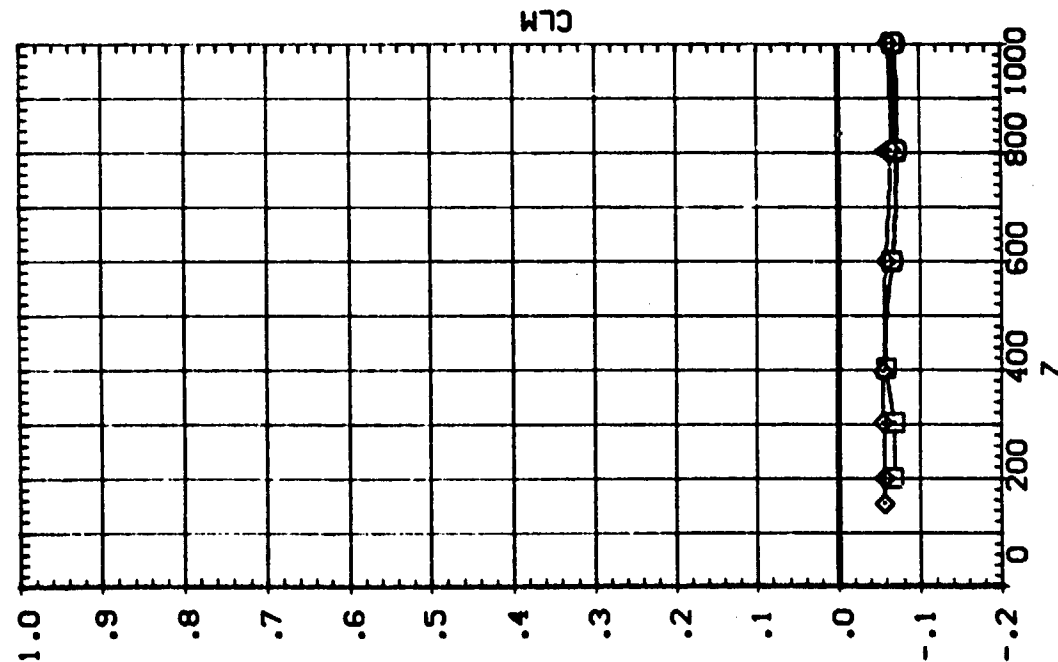
SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09B/EI

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ476)

SYMBOL
 ○
 □
 ◇
 △

PARAMETRIC VALUES
 Y 1.997 MACH 4.510 PTOTL 28.900
 200.590 ALPHA .000 BETA -5.000
 399.270 DALPHA -10.000 DBETA -5.000
 800.050 X .000 PCWB 1500.000

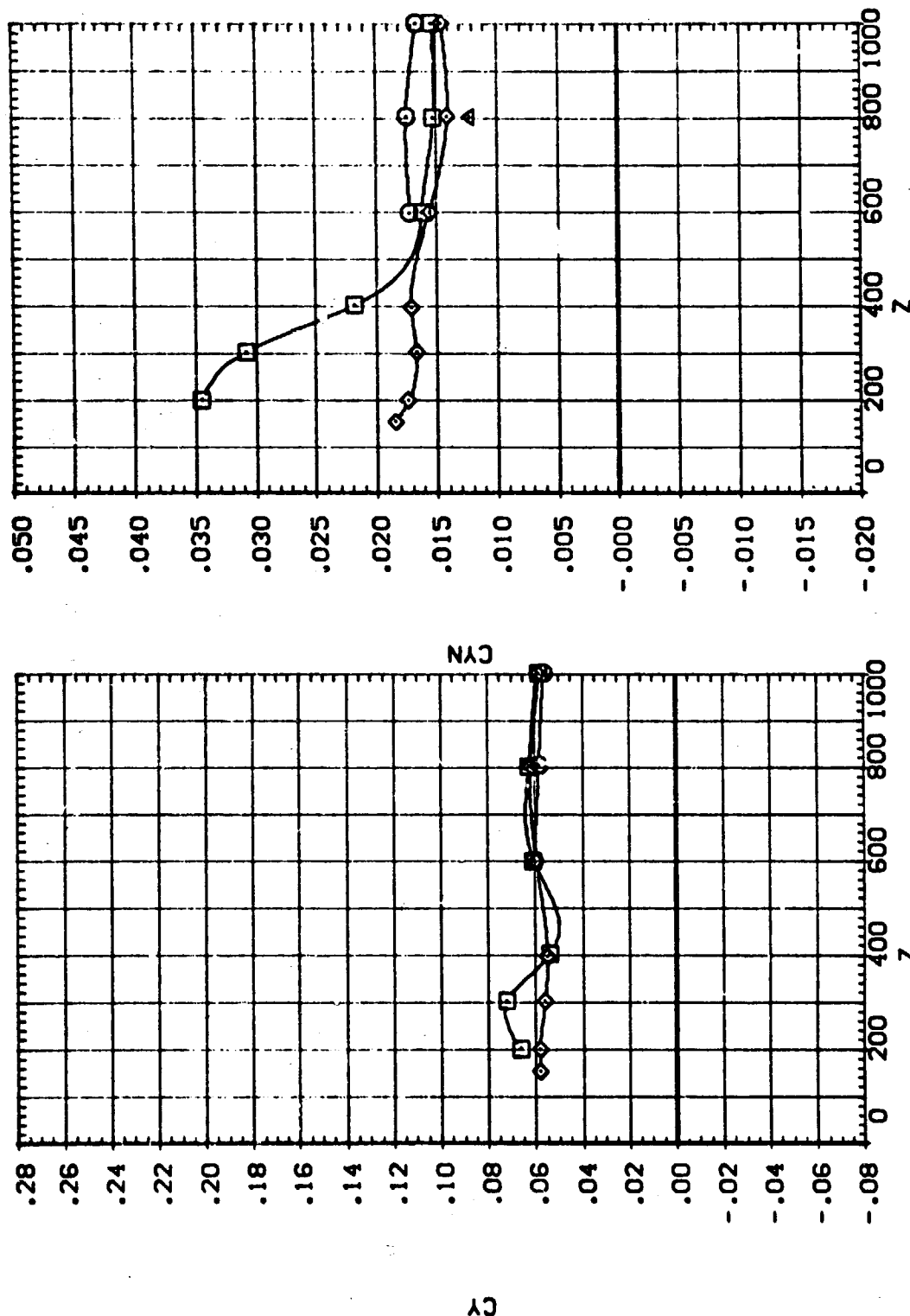
SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS FOR
 INDIVIDUAL DATASETS



IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ476)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|--------|----------|--|
| | | MACH | 4.510 | PIDITL | 28.900 | |
| ○ | 200.550 | ALPHA | .000 | BETA | -5.000 | |
| □ | 399.270 | DALPHA | -10.000 | DBETA | -5.000 | |
| ◇ | 800.050 | X | .000 | PC+8 | 1500.000 | |

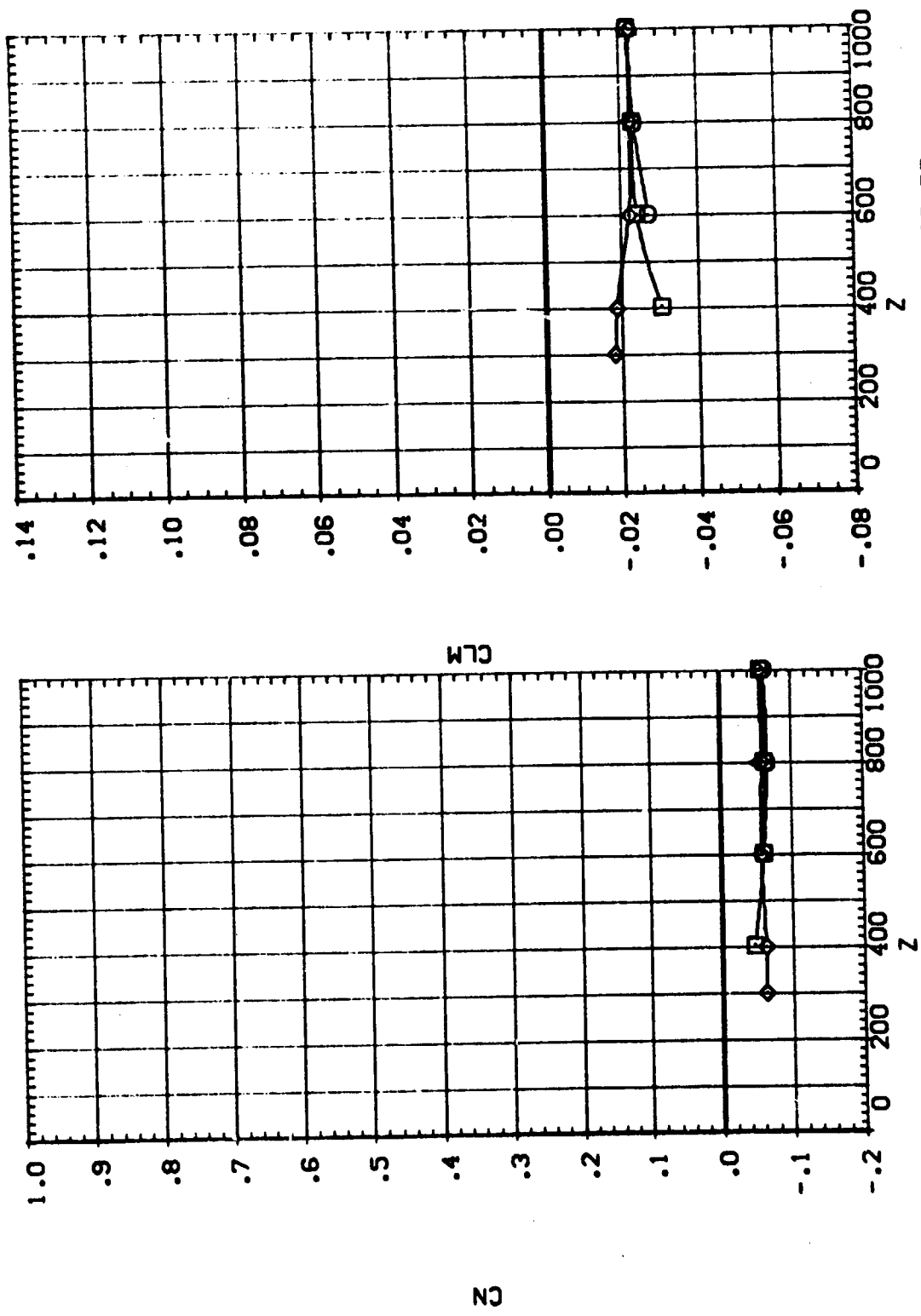


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ477)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| | | MACH | 4.510 | POTL | 28.500 | |
| □ | 200.750 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 400.150 | DALPHA | -10.000 | DBETA | -10.000 | |
| △ | 800.030 | X | .000 | PC+PB | 1500.000 | |

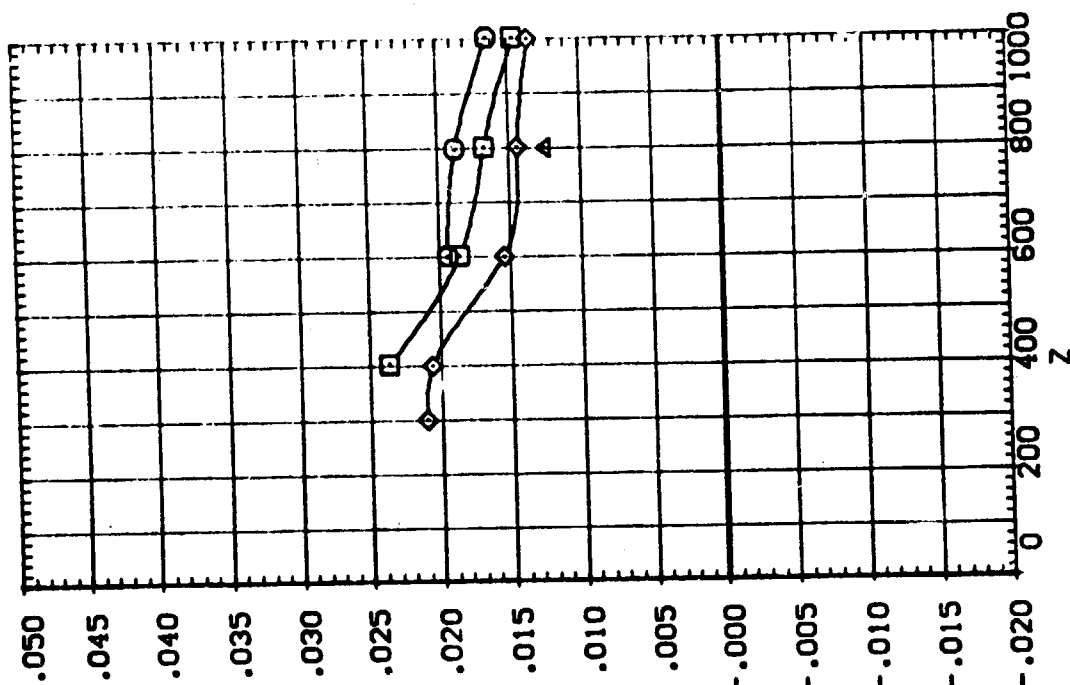
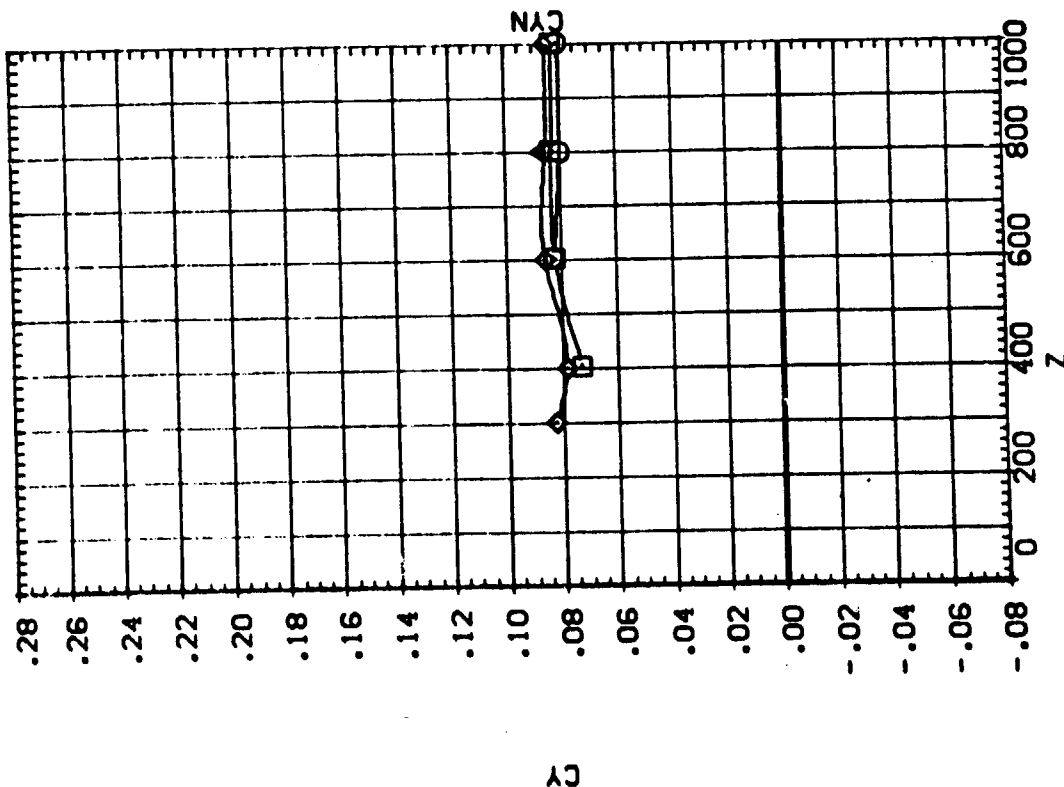


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ477)

SYMBOL

○ □ ◇ △

| PARAMETRIC VALUES | |
|-------------------|----------|
| Y | 1.237 |
| MACH | 4.510 |
| PTOTL | 28.900 |
| ALPHA | .000 |
| BETA | -5.000 |
| DBETA | -10.000 |
| PC-H8 | 1500.000 |
| X | .000 |

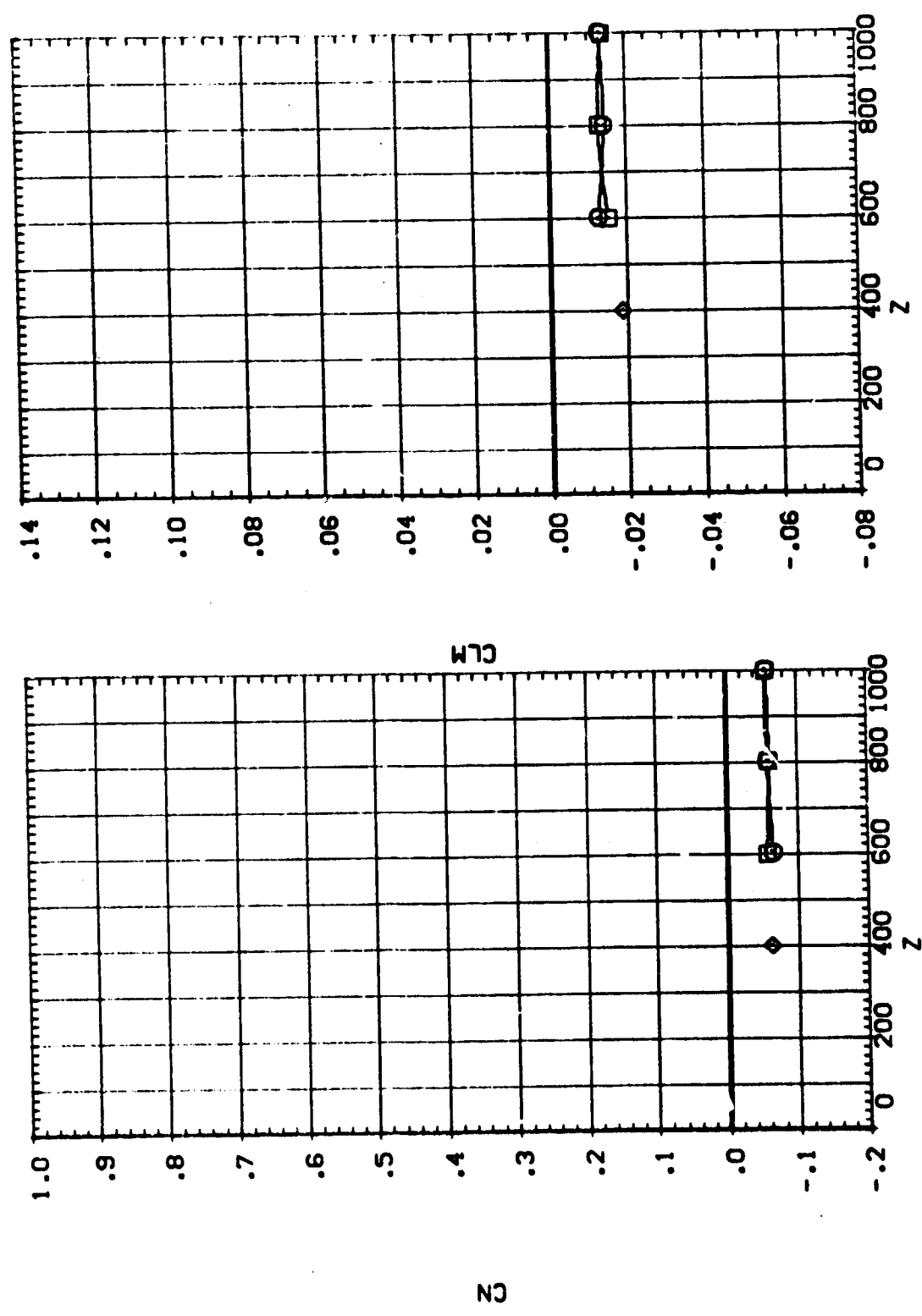


SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ478)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | PARAMETRIC VALUES | | | | |
|--------|-------------------|--------|---------|--------|----------|
| | Y | MACH | 4.510 | PITOTL | 28.900 |
| ○ | 200.700 | ALPHA | .000 | BETA | -5.000 |
| □ | 399.960 | DALPHA | -10.000 | DBETA | -20.000 |
| ◇ | 401.220 | X | .000 | PC+PB | 1500.000 |

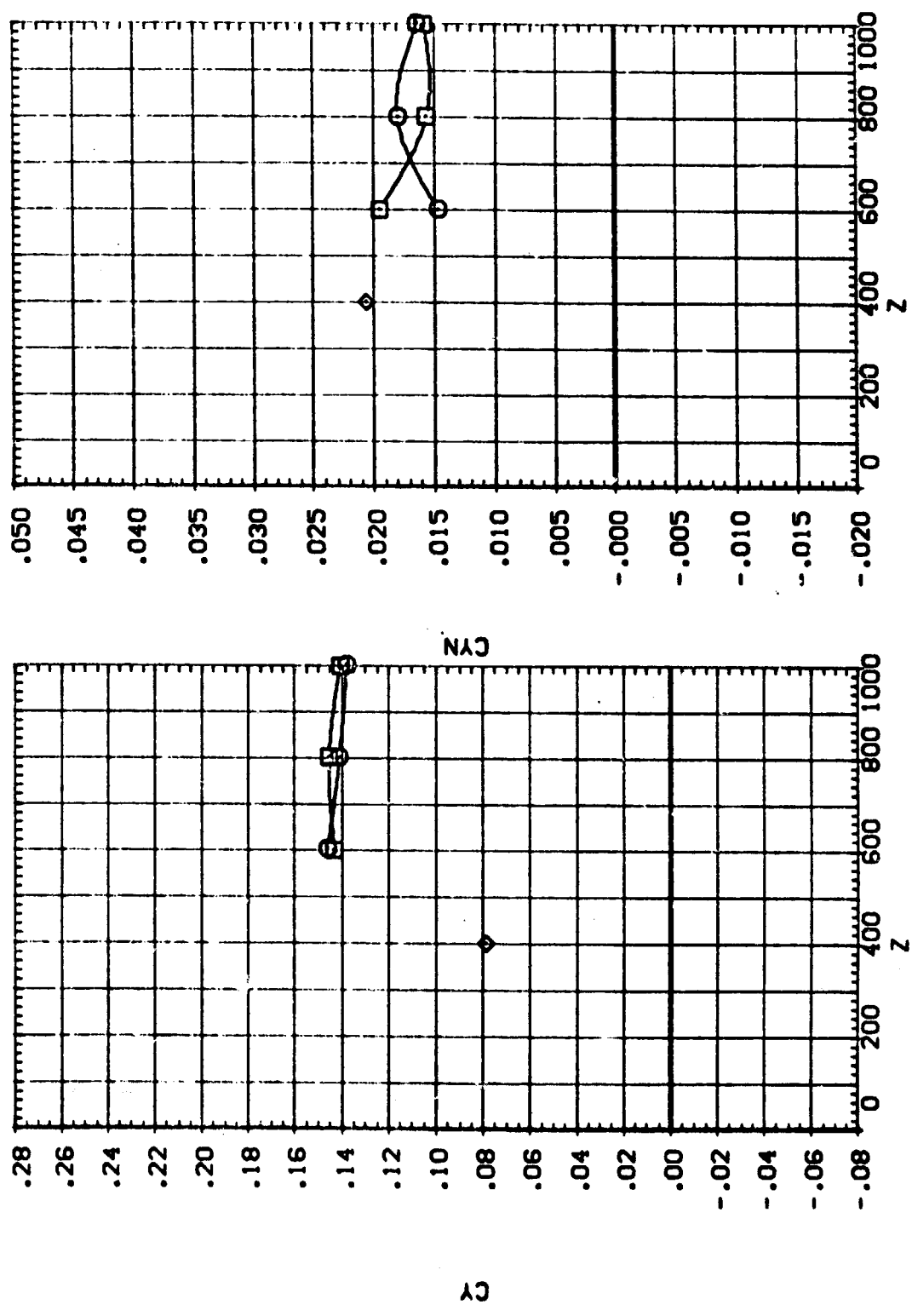


IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ478)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL Y
 ○ 200.700
 □ 399.960
 ◇ 401.220

PARAMETRIC VALUES
 MACH 4.510 PTOTL 28.900
 ALPHA .000 BETA -5.000
 DALPHA -10.000 DBETA -20.000
 X .000 PCMB 1500.000

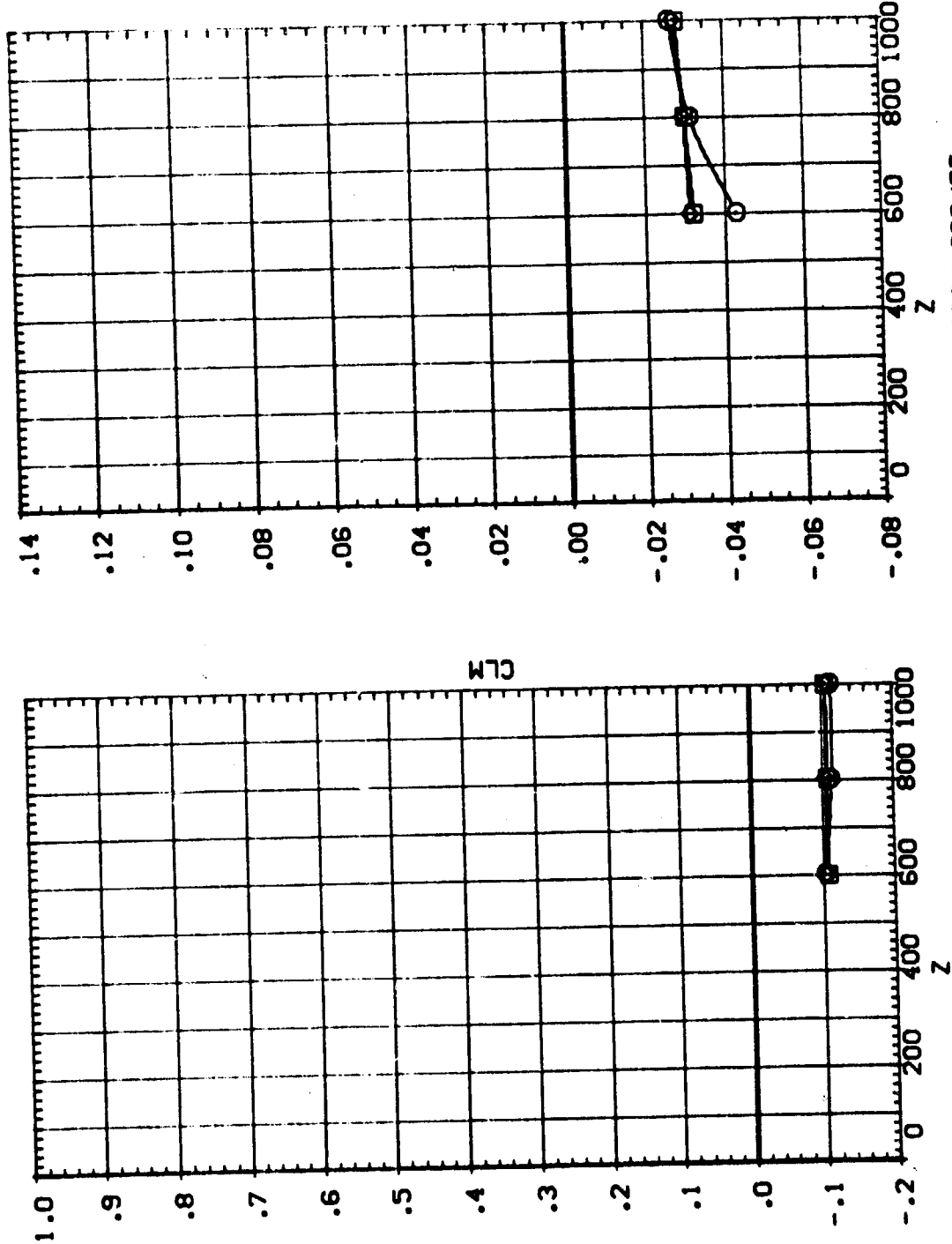


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

1A13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ479)

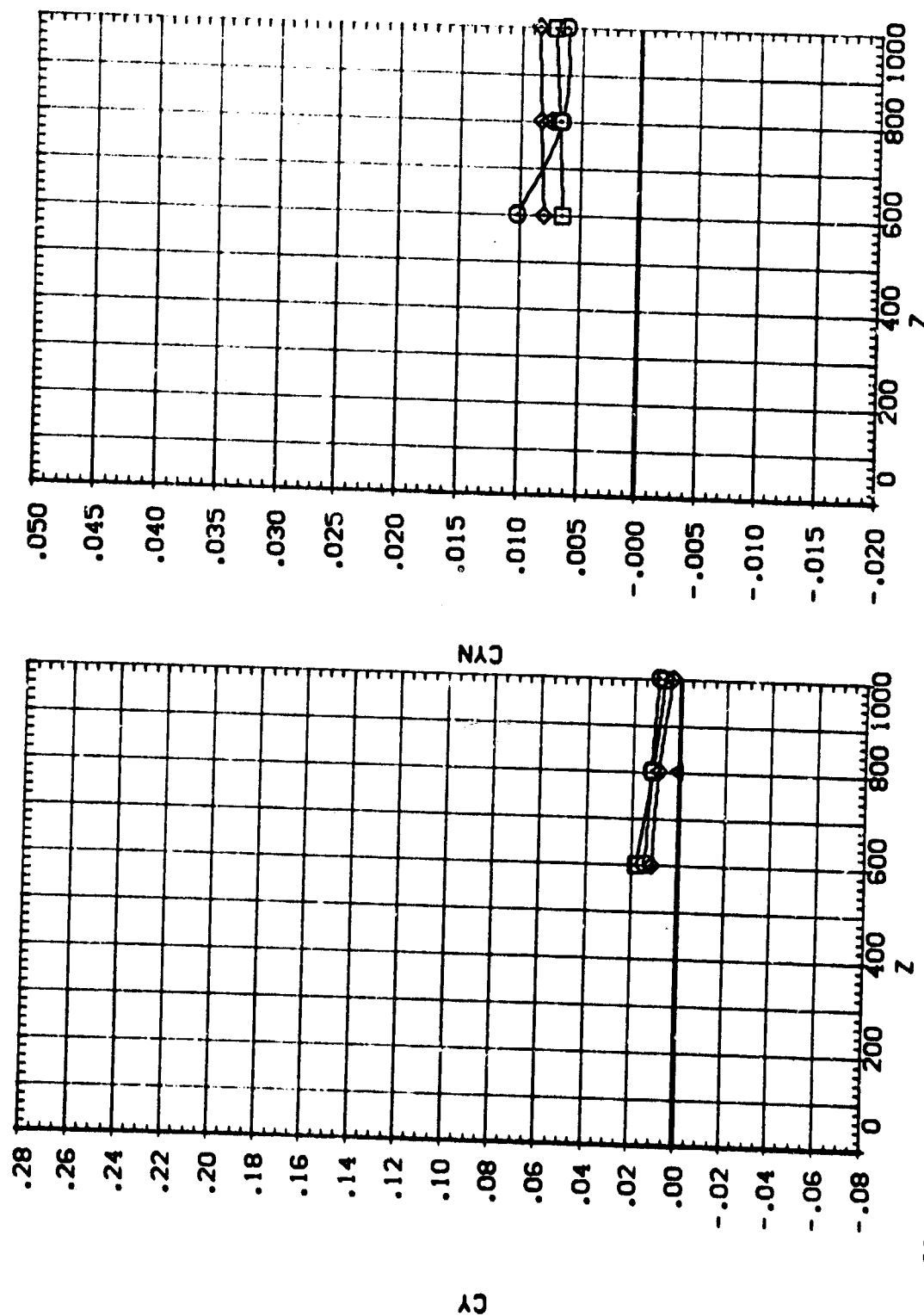
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | MACH | PARAMETRIC VALUES | | | |
|--------|---------|-------|-------------------|-------|----------|--|
| | | | 4.510 | PTOTL | 28.900 | |
| □ | 202.170 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 402.070 | DBETA | -20.000 | PC#8 | 5.000 | |
| △ | 799.990 | X | .000 | | 1500.000 | |



| | | | | |
|--------|---------|---------|-------|----------|
| MACH | 2.513 | 4.510 | POTL | 28.900 |
| ALPHA | 202.170 | .000 | BETA | -5.000 |
| DALPHA | 402.070 | -20.000 | OBETA | 5.000 |
| X | 799.990 | .000 | PCMB | 1500.000 |

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

SRB W/PLUME'S AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET²

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ480)

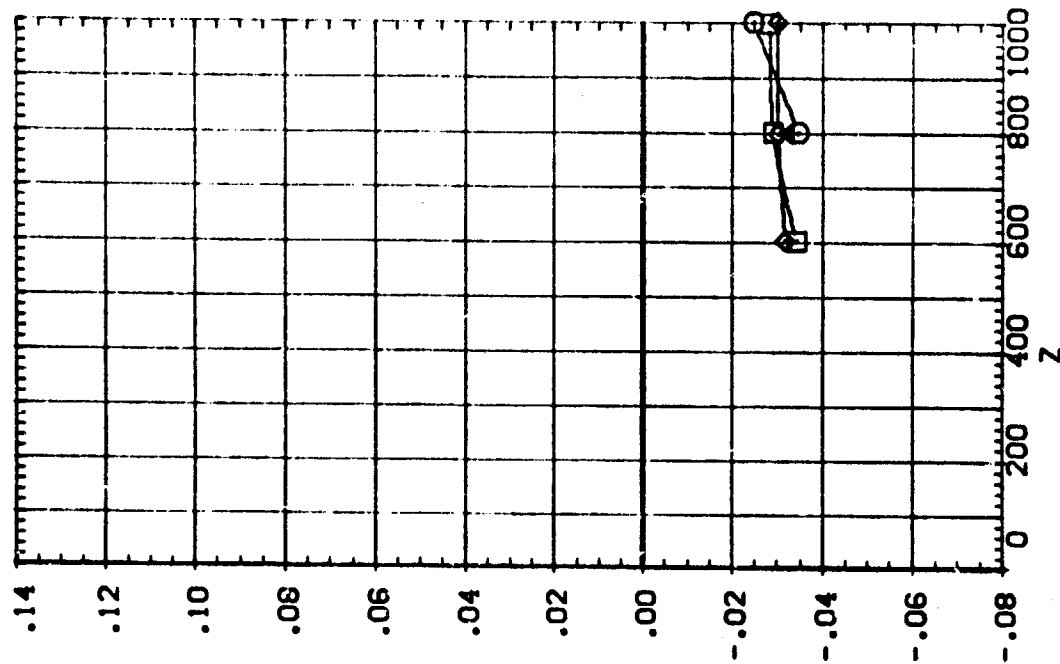
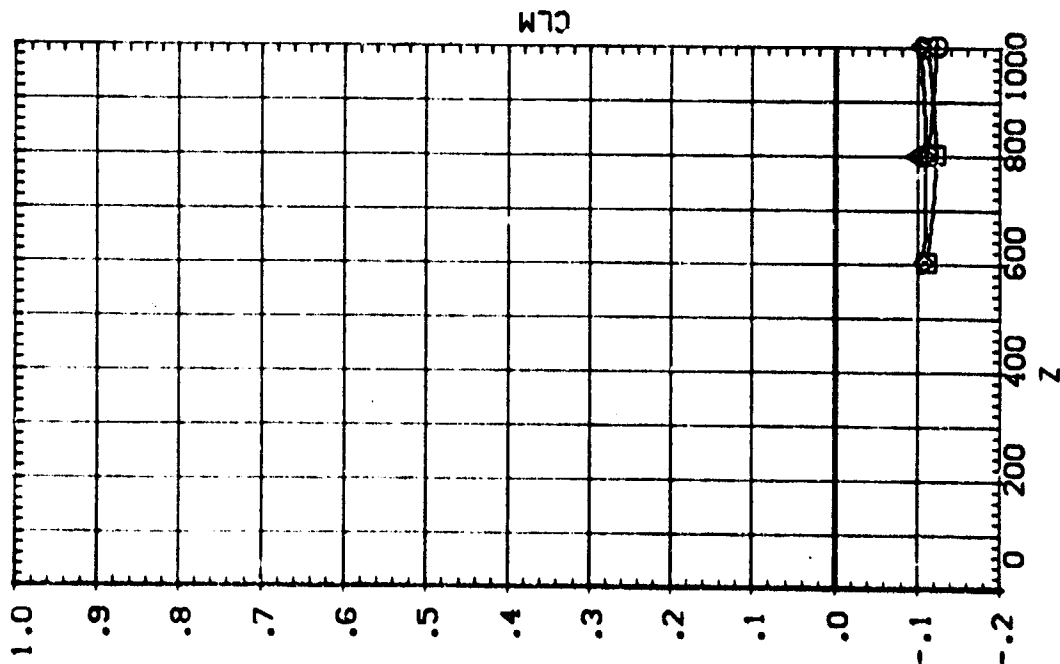
SYMBOL

□
◇
△

PARAMETRIC VALUES

| Y | MACH | PIOTL | 28.900 |
|---------|-------|-------|----------|
| 203.770 | ALPHA | BETA | -5.000 |
| 400.070 | DIAM | DBETA | .000 |
| 801.000 | X | PC-H8 | 1500.000 |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

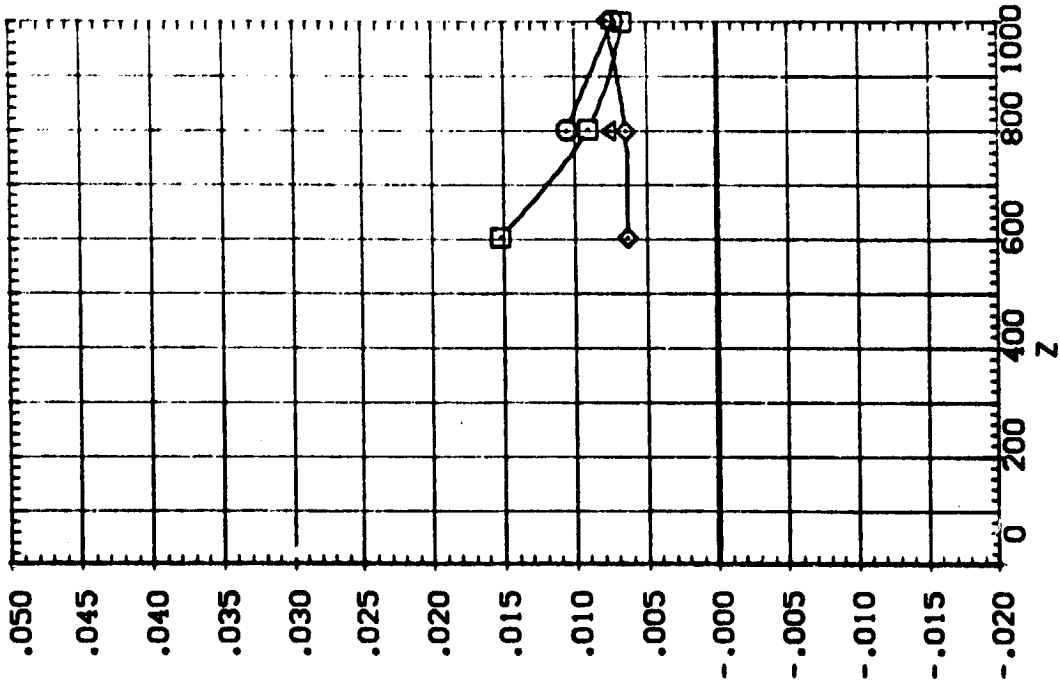
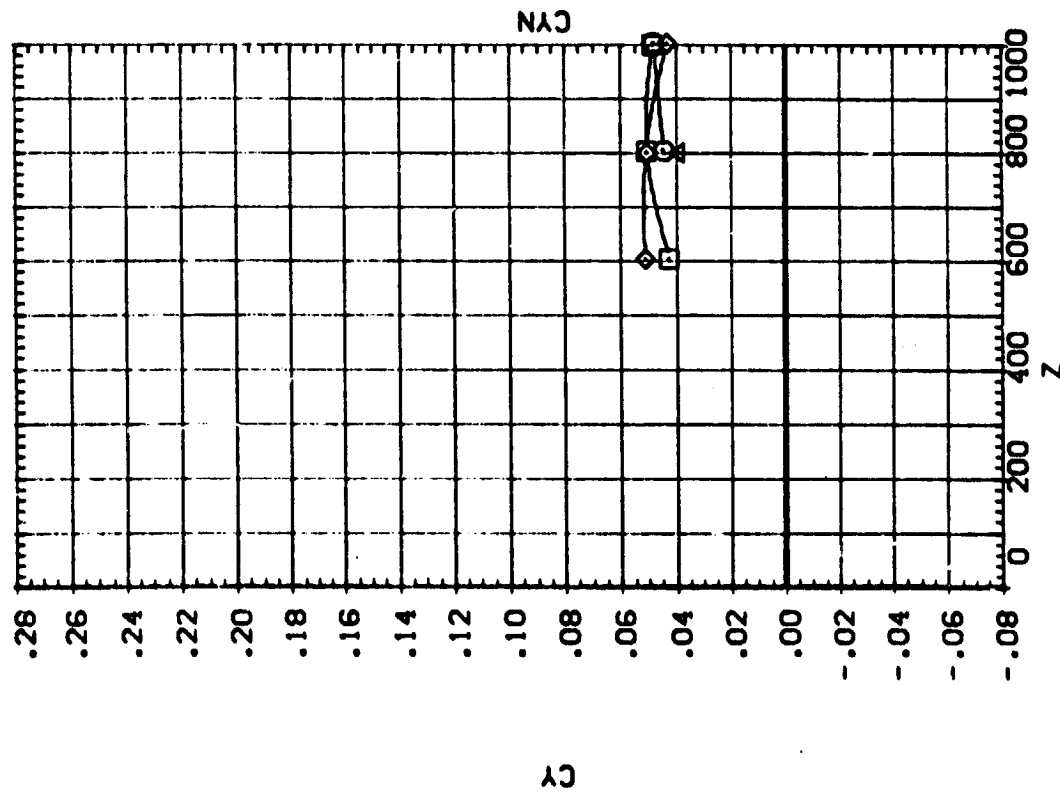


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

SYMBOL

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-
- ◇
- △

| Y | MACH | PTOTL | 28.900 |
|---------|---------|-------|----------|
| .943 | 4.510 | PTOTL | -5.000 |
| 200.770 | .000 | BETA | .000 |
| 400.070 | -20.000 | DBETA | 1500.000 |
| 801.000 | .000 | PC-HB | |

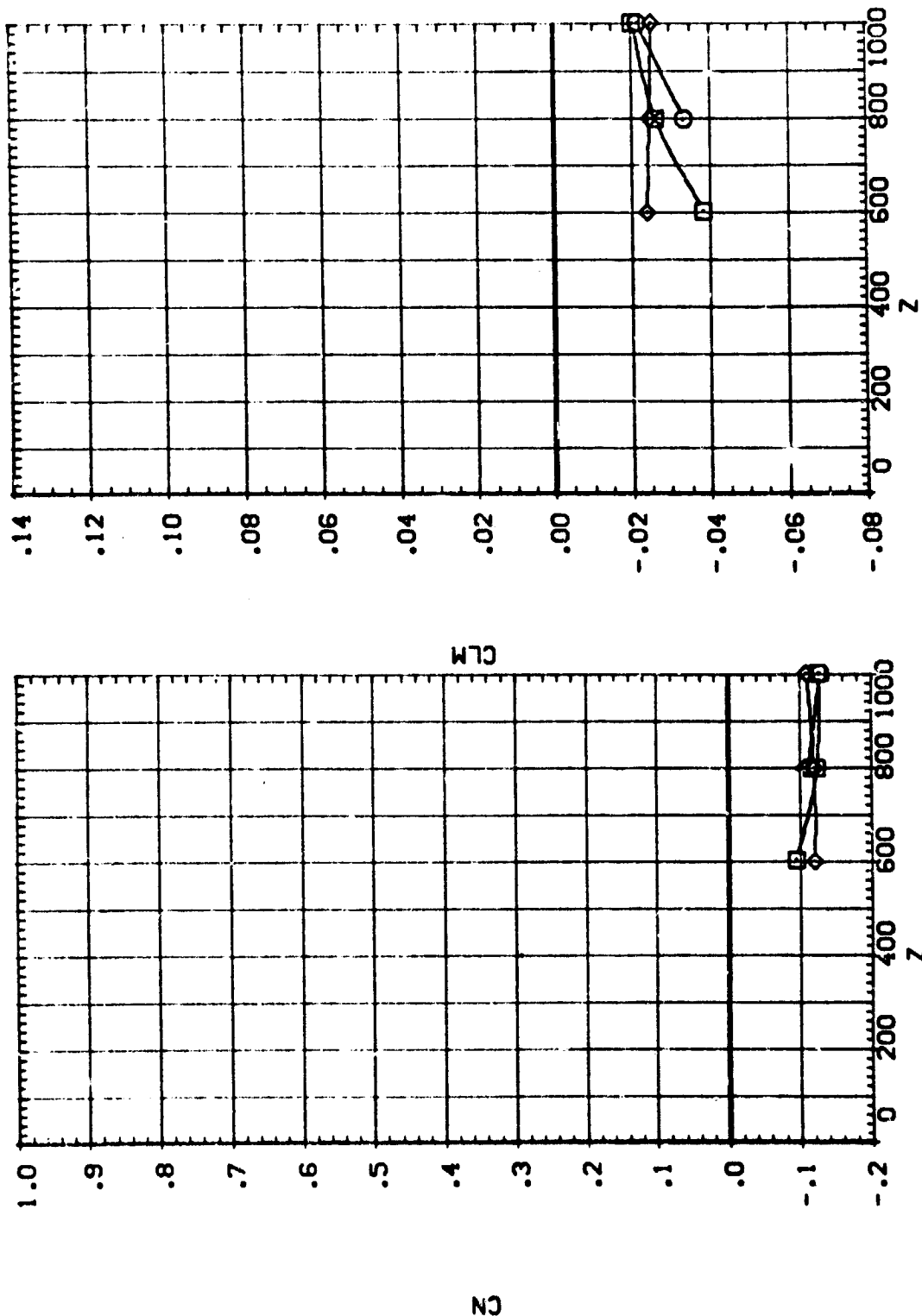


SEE THE ASSOCIATED DATA
SHEET FOR REFERENCE
TO THE DUAL DATASETS

IA13.SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (RTJ481)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| | | MACH | 4.510 | PTOTL | 29.900 | |
| ○ | 201.950 | ALPHA | .000 | BETA | 5.000 | |
| □ | 400.380 | DALPHA | -20.000 | DBETA | -5.000 | |
| ◇ | 800.130 | X | .000 | PC+18 | 1500.000 | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13 SRB(S8) WITH PLUMES SEPARATING FROM 09T10 (PTJ482)

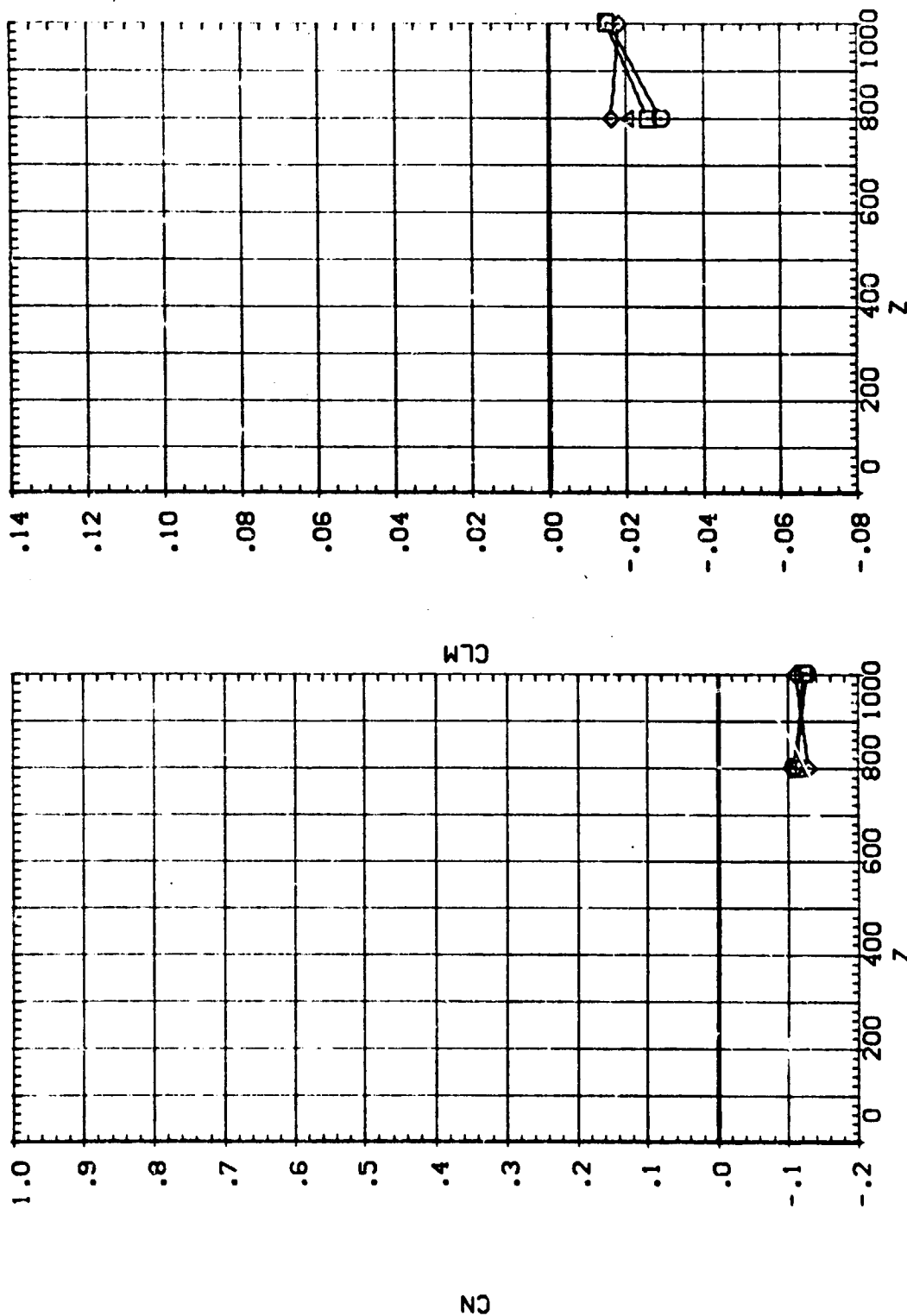
SYMBOL

○ □ ◇ △

PARAMETRIC VALUES

| Y | MACH | PTOTL | 28.900 |
|---------|---------|-------|----------|
| -0.746 | 4.510 | BETA | -5.000 |
| 201.790 | .000 | CBETA | -10.000 |
| 401.140 | -20.000 | PC+PB | 1500.000 |
| 799.900 | .000 | | |

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

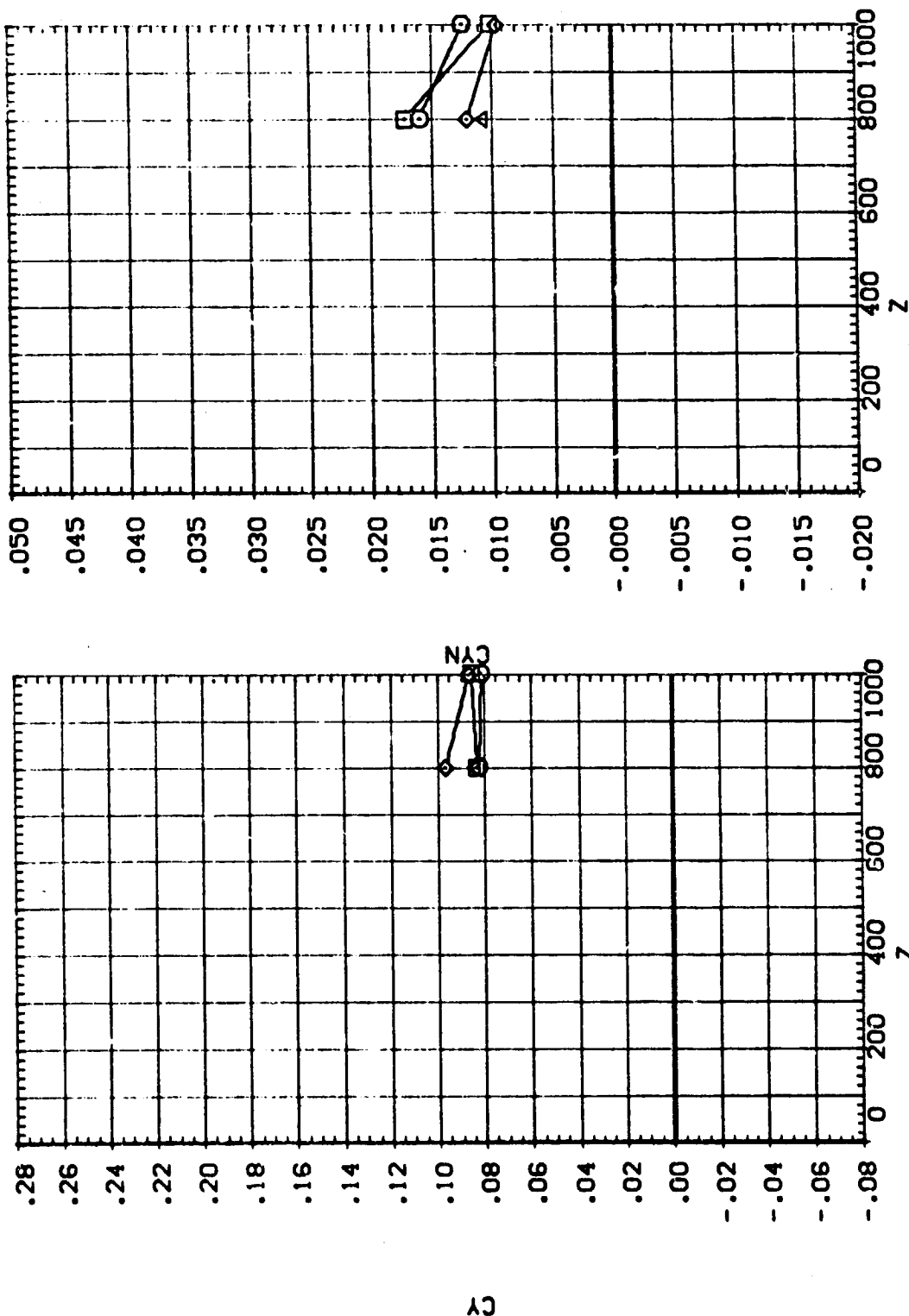


SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM 09T10

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ482)

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

| SYMBOL | Y | PARAMETRIC VALUES | | | | |
|--------|---------|-------------------|---------|-------|----------|--|
| | | MACH | 4.510 | PTOTL | 28.900 | |
| ○ | 201.790 | ALPHA | .000 | BETA | -5.000 | |
| ◇ | 401.140 | DALPHA | -20.000 | DBETA | -10.000 | |
| △ | 799.900 | X | .000 | PC-HB | 1500.000 | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ483)

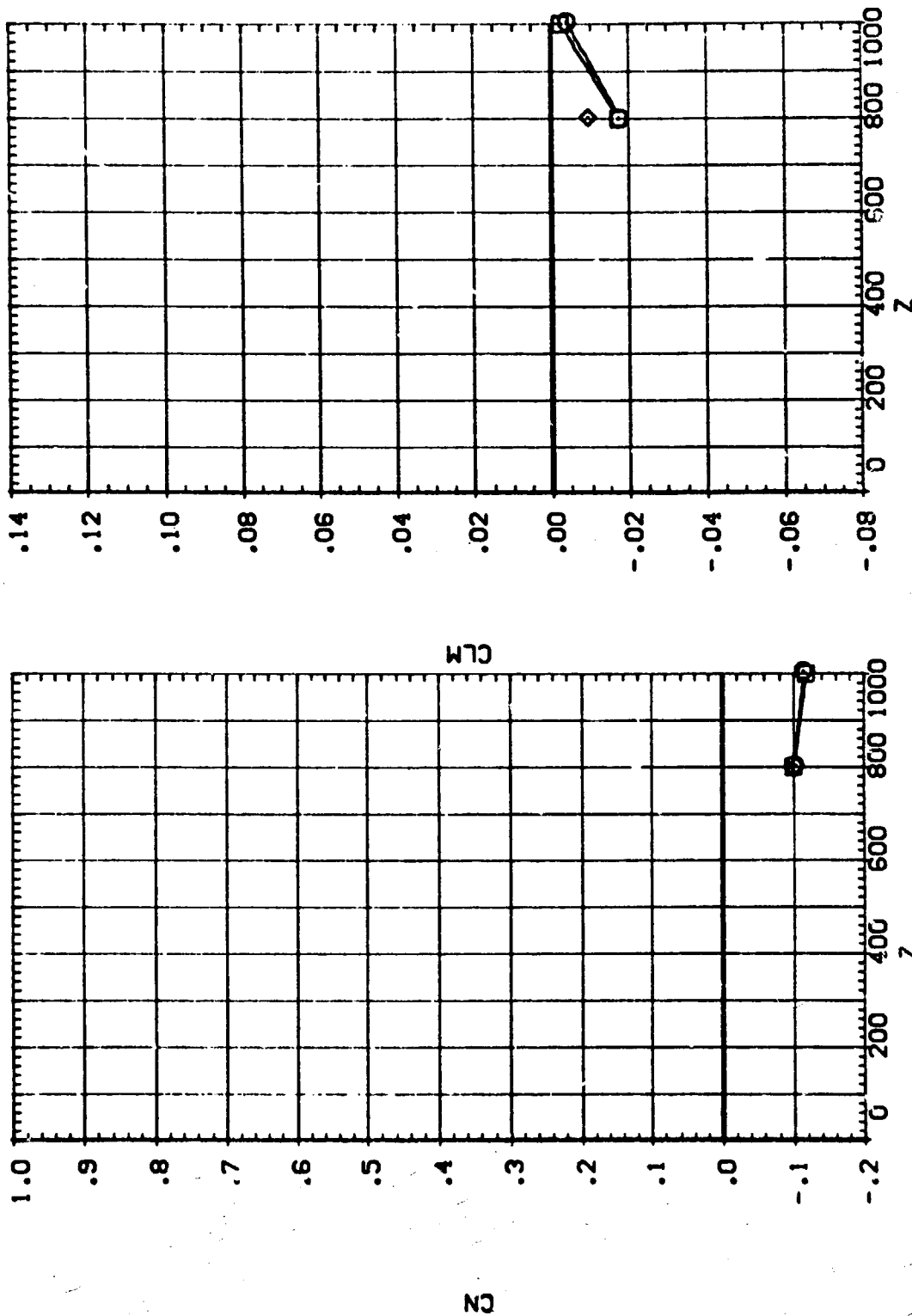
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS FOR INDIVIDUAL DATASETS

SYMBOL

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PARAMETRIC VALUES

| Y | MACH | ALPHA | PIOTL | BETA | PC+PB |
|---------|-------|---------|--------|---------|----------|
| 200.790 | 4.510 | .000 | 28.900 | -5.000 | 1500.000 |
| 400.620 | | -20.000 | | -20.000 | |
| 799.960 | | .000 | | | |



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET

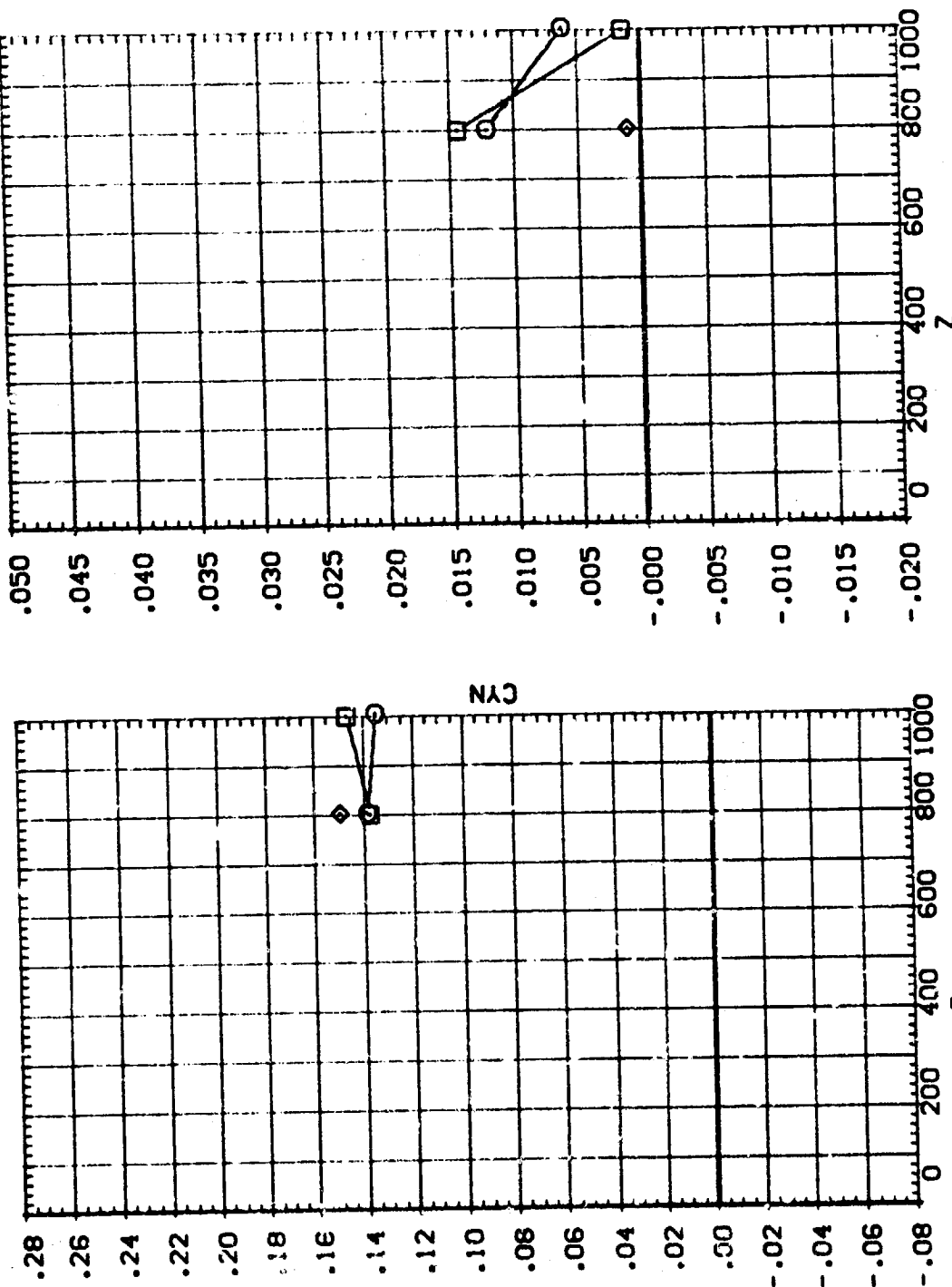
IA13.SRB(S8)WITH PLUMES SEPARATING FROM 09T10 (RTJ483)

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS FOR
INDIVIDUAL DATASETS

PARAMETRIC VALUES

| Y | MACH | PIOTL | 28.300 |
|---------|---------|-------|----------|
| 200.790 | 4.510 | BETA | -5.000 |
| 400.620 | .000 | OBETA | -20.000 |
| 799.960 | -20.000 | PC-HB | 1500.000 |
| X | .000 | | |

SYMBOL
○
□
◇



SRB W/PLUMES AERODYNAMIC CHARACTERISTICS DURING SEPARATION FROM ORB/ET